```
=> file registry
FILE 'REGISTRY' ENTERED AT 15:05:44 ON 21 APR 2006
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STRUCTURE FILE UPDATES:   19 APR 2006  HIGHEST RN 881169-11-5
DICTIONARY FILE UPDATES:  19 APR 2006  HIGHEST RN 881169-11-5

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TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

  Please note that search-term pricing does ap
  conducting SmartSELECT searches.

*********************************************************************
*                                                                   *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,   *
* effective March 20, 2005.  A new display format, IDERL, is now    *
* available and contains the CA role and document type information. *
*                                                                   *
*********************************************************************

Structure search iteration limits have been increased.  See HELP SLIMITS
for details.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
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=> file casreact
FILE 'CASREACT' ENTERED AT 15:05:51 ON 21 APR 2006
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FILE CONTENT:1840 - 16 Apr 2006 VOL 144 ISS 16

New CAS Information Use Policies, enter HELP USAGETERMS for details.

************************************************************
*                                                          *
*     CASREACT now has more than 10 million reactions      *
*                                                          *
************************************************************

Some CASREACT records are derived from the ZIC/VINITI database (1974-1991)
provided by InfoChem, INPI data prior to 1986, and Biotransformations
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database compiled under the direction of Professor Dr. Klaus Kieslich.

This file contains CAS Registry Numbers for easy and accurate substance identification.

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=> d stat que L16
L3              STR
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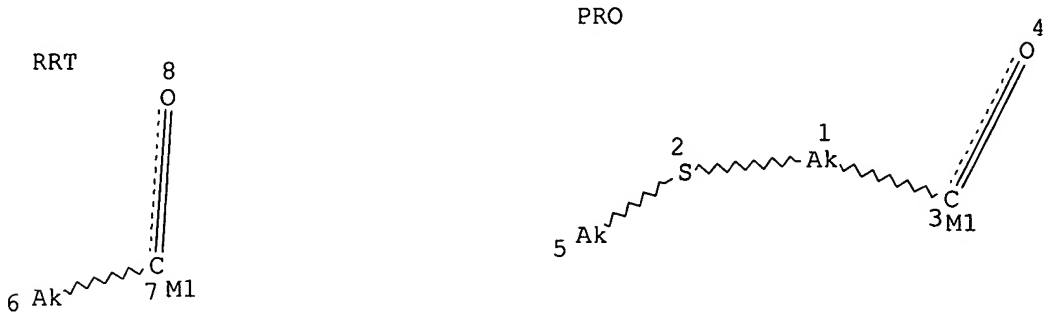


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CONNECT IS E1  RC AT   5
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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   8

STEREO ATTRIBUTES: NONE
L6       365688 SEA FILE=REGISTRY ABB=ON  PLU=ON  46.402.1/RID
L7        32871 SEA FILE=REGISTRY ABB=ON  PLU=ON  L6 AND CASREACT/LC
L8        29401 SEA FILE=REGISTRY ABB=ON  PLU=ON  L7 AND NC=1
L9         3470 SEA FILE=REGISTRY ABB=ON  PLU=ON  L7 NOT L8
L10       18509 SEA FILE=CASREACT ABB=ON  PLU=ON  L8/NPRO
L13        1064 SEA FILE=CASREACT ABB=ON  PLU=ON  L9/NPRO
L14       18960 SEA FILE=CASREACT ABB=ON  PLU=ON  L10 OR L13
L16           1 SEA FILE=CASREACT SUB=L14 SSS FUL L3 (     1 REACTIONS)

100.0% DONE   70811 VERIFIED       1 HIT RXNS                    1 DOCS
SEARCH TIME: 00.00.02


=> d ibib abs hit L16 1
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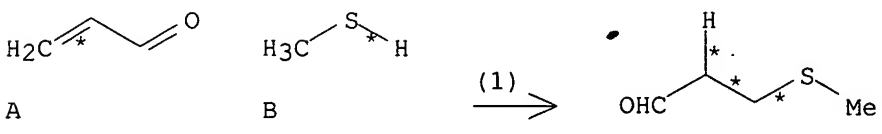
L16 ANSWER 1 OF 1 CASREACT COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 140:356948 CASREACT
TITLE: Catalytic addition reaction for the production of 3-(methylthio)propanal from mercaptomethane and acrolein
INVENTOR(S): Rey, Patrick
PATENT ASSIGNEE(S): Adisseo France S.A.S., Fr.
SOURCE: Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1413573	A1	20040428	EP 2002-356211	20021024
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
CA 2495746	AA	20040506	CA 2003-2495746	20031014
WO 2004037774	A1	20040506	WO 2003-IB4557	20031014
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003267771	A1	20040513	AU 2003-267771	20031014
EP 1556343	A1	20050727	EP 2003-748466	20031014
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003015385	A	20050823	BR 2003-15385	20031014
US 2005240048	A1	20051027	US 2005-524548	20050516
NO 2005002471	A	20050725	NO 2005-2471	20050523
PRIORITY APPLN. INFO.:			EP 2002-356211	20021024
			WO 2003-IB4557	20031014

AB A process for the production of 3-(methylthio)propanal comprises reacting mercaptomethane and acrolein in the presence of a catalyst comprising an organic base such as an N-alkylmorpholine (e.g., 4-methylmorpholine).

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

RX(1) OF 3 **A** + B ===> **C**...



A B C

RX(1) RCT A **107-02-8**, B 74-93-1
PRO C **3268-49-3**
CAT 64-19-7 AcOH, 109-02-4 N-Methylmorpholine
SOL 74-93-1 MeSH
CON SUBSTAGE(1) room temperature -> 40 deg C
SUBSTAGE(2) 40 deg C
NTE optimization study, optimized on catalyst

=> => file registry
FILE 'REGISTRY' ENTERED AT 15:43:40 ON 21 APR 2006
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STRUCTURE FILE UPDATES: 19 APR 2006 HIGHEST RN 881169-11-5
DICTIONARY FILE UPDATES: 19 APR 2006 HIGHEST RN 881169-11-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

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* *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
* *
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Structure search iteration limits have been increased. See HELP SLIMITS for details.

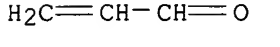
REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=> d ide L21

L21 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN
RN 107-02-8 REGISTRY
ED Entered STN: 16 Nov 1984
CN **2-Propenal (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Acrolein (8CI)
OTHER NAMES:
CN 2-Propen-1-one
CN Acrylaldehyde
CN Acrylic aldehyde
CN Allyl aldehyde

CN Aqualin
CN Magnacide B
CN Magnacide H
CN NSC 8819
CN Prop-2-en-1-al
CN Propenal
FS 3D CONCORD
DR 25314-61-8
MF C3 H4 O
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT, PS, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

12652 REFERENCES IN FILE CA (1907 TO DATE)
286 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
12663 REFERENCES IN FILE CAPLUS (1907 TO DATE)
5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> d ide L22

L22 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN
RN 3268-49-3 REGISTRY
ED Entered STN: 16 Nov 1984
CN **Propanal, 3-(methylthio)- (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Propionaldehyde, 3-(methylthio)- (6CI, 7CI, 8CI)
OTHER NAMES:
CN β-(Methylmercapto)propionaldehyde
CN β-(Methylthio)propionaldehyde
CN β-(Methylthio)propionic aldehyde
CN 3-(Methylmercapto)propionaldehyde
CN 3-(Methylthio)propanal
CN 3-(Methylthio)propionaldehyde
CN 3-Methylsulfanylpropionaldehyde
CN Methional
CN NSC 15874
FS 3D CONCORD
MF C4 H8 O S
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CSCHEM, CSNB, DIPPR*, EMBASE, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, NAPRALERT, NIOSHTIC, RTECS*, SCISEARCH, SPECINFO, TOXCENTER, ULIDAT, USPAT2, USPATFULL

(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

MeS—CH_2—CH_2—CHO

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1159 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1164 REFERENCES IN FILE CAPLUS (1907 TO DATE)
29 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> => file casreact
FILE 'CASREACT' ENTERED AT 16:16:50 ON 21 APR 2006
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FILE CONTENT:1840 - 16 Apr 2006 VOL 144 ISS 16

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****
*
* CASREACT now has more than 10 million reactions *
*
****

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d stat que L32
L30 1757 SEA FILE=CASREACT ABB=ON PLU=ON 107-02-8/NPRO
L31 9 SEA FILE=CASREACT ABB=ON PLU=ON 3268-49-3/PRO
L32 8 SEA FILE=CASREACT ABB=ON PLU=ON L30 (L) L31

=> s L32 not L16
L47 7 L32 NOT L16 → previously printed

=> d ibib abs hit L47 1-7

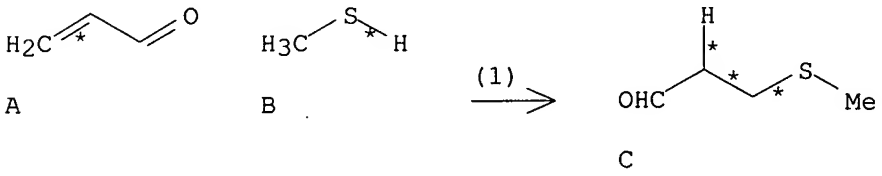
L47 ANSWER 1 OF 7 CASREACT COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 140:287102 CASREACT
TITLE: Method for producing 3-methylthiopropanal from acrolein and methyl mercaptan

INVENTOR(S): Shiozaki, Tetsuya; Haga, Toru
PATENT ASSIGNEE(S): Sumitomo Chemical Company, Limited, Japan
SOURCE: U.S. Pat. Appl. Publ., 4 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004063650	A1	20040401	US 2003-665006	20030922
JP 2004115461	A2	20040415	JP 2002-282874	20020927
EP 1408029	A1	20040414	EP 2003-21191	20030924
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1496979	A	20040519	CN 2003-125534	20030925
PRIORITY APPLN. INFO.:			JP 2002-282874	20020927

AB 3-Methylthiopropanal is produced in high yield and selectivity by supplying acrolein and Me mercaptan together or sequentially with an acidic compound (e.g., acetic acid) and a basic compound (e.g., pyridine) into a reaction system to react the acrolein with the Me mercaptan, where the basic compound is used in an amount of about 0.3 mol or less per mol of the acidic compound

RX(1) OF 1 **A** + B ===> **C**



A B C

RX(1) RCT A **107-02-8**, B 74-93-1
RGT D 64-19-7 AcOH
PRO C **3268-49-3**
SOL 110-86-1 Pyridine
CON 45 - 50 minutes, 70 deg C
NTE other products detected

L47 ANSWER 2 OF 7 CASREACT COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 128:114715 CASREACT
TITLE: Processes for the preparation of 3-(methylthio)propanal and 2-hydroxy-4-(methylthio)butanenitrile
INVENTOR(S): Blackburn, Thomas F.; Pellegrin, Paul F.
PATENT ASSIGNEE(S): Novus International, Inc., USA
SOURCE: U.S., 9 pp., Cont.-in-part of U.S. 5,663,409.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

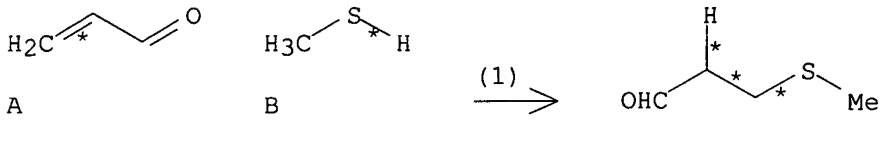
US 5705675	A	19980106	US 1995-581249	19951229
US 5663409	A	19970902	US 1995-476356	19950607
ZA 9604335	A	19960820	ZA 1996-4335	19960528
WO 9640631	A1	19961219	WO 1996-US9060	19960604
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML				
AU 9659873	A1	19961230	AU 1996-59873	19960604
AU 714151	B2	19991223		
EP 830341	A1	19980325	EP 1996-917222	19960604
EP 830341	B1	20010905		
R: BE, DE, DK, ES, FR, GB, IT, LU, NL, MC, PT, IE				
CN 1189818	A	19980805	CN 1996-195190	19960604
CN 1092184	B	20021009		
JP 11511119	T2	19990928	JP 1997-501471	19960604
RU 2173681	C2	20010920	RU 1998-100220	19960604
ES 2160819	T3	20011116	ES 1996-917222	19960604
PT 830341	T	20011228	PT 1996-917222	19960604
CN 1510030	A	20040707	CN 2002-200212645719960604	
PRIORITY APPLN. INFO.:			US 1995-476356	19950607
			US 1995-581249	19951229
			WO 1996-US9060	19960604

OTHER SOURCE(S): MARPAT 128:114715

AB A catalytic processes for the preparation of 3-(methylthio)propanal and 2-hydroxy-4-(methylthio)butanenitrile using novel addition catalysts is described. The novel addition catalysts include: triisopropanolamine, nicotinamide, imidazole, benzimidazole, 2-fluoropyridine, poly-4-vinylpyridine, 4-dimethylaminopyridine, picoline, pyrazine, trialkylamines, and tertiary amines. E.g., reaction of MeSH and acrolein in presence of poly-4-vinylpyridine gave 89.0% 3-(methylthio)propanal. The aldehyde product, containing the poly-4-vinylpyridine catalyst, was converted to the nitrile in the same reactor by treatment with HCN. The yield of nitrile was 72.9%.

REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

RX(1) OF 3 **A** + B ===> **C**...



A B C

RX(1) RCT A **107-02-8**, B 74-93-1
PRO C **3268-49-3**
CAT 110-86-1 Pyridine, 64-19-7 AcOH
NTE novel process focuses on the catalyst/acid combination; process minimizes the extent of polymer formation

L47 ANSWER 3 OF 7 CASREACT COPYRIGHT 2006 ACS on STN

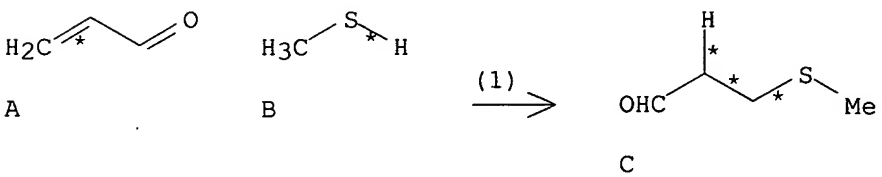
ACCESSION NUMBER: 126:157183 CASREACT
TITLE: Process for the continuous preparation of 3-(methylthio)propanal from acrolein and methyl mercaptan
INVENTOR(S): Hsu, Yung C.
PATENT ASSIGNEE(S): Novus International, Inc., USA
SOURCE: PCT Int. Appl., 85 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9700858	A1	19970109	WO 1996-US10920	19960621
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML				
US 5905171	A	19990518	US 1996-667099	19960620
AU 9663959	A1	19970122	AU 1996-63959	19960621
AU 726921	B2	20001123		
EP 842149	A1	19980520	EP 1996-923452	19960621
EP 842149	B1	20030205		
R: BE, DE, DK, ES, FR, GB, IT, LU, NL, MC, PT, IE				
CN 1188470	A	19980722	CN 1996-194943	19960621
CN 1120834	B	20030910		
JP 11508266	T2	19990721	JP 1997-504005	19960621
RU 2172734	C2	20010827	RU 1998-100590	19960621
ES 2192607	T3	20031016	ES 1996-923452	19960621

PRIORITY APPLN. INFO.:
US 1995-421P 19950622
US 1996-667099 19960620
WO 1996-US10920 19960621

AB In the title process, a liquid reaction, medium containing 3-(methylthio)propanal and a catalyst for the reaction between Me mercaptan and acrolein, is contacted with a gaseous acrolein feed stream in a gas-liquid contact zone. The gaseous acrolein feed stream comprises acrolein vapor and noncondensable gas and the acrolein is transferred from the acrolein feed stream to the reaction medium. Me mercaptan, introduced into the reaction medium, reacts with the acrolein in that medium, producing a liquid reaction product containing 3-(methylthio)propanal. The noncondensable gas is then separated from the liquid reaction product the reaction product is divided into a produce fraction and a circulating fraction, and the circulating fraction is recycled to the gas/liquid contact zone. Process flow diagrams are presented.

RX(1) OF 1 **A** + B ===> **C**



A B C

RX(1) RCT A **107-02-8**, B 74-93-1
PRO C **3268-49-3**
NTE continous process

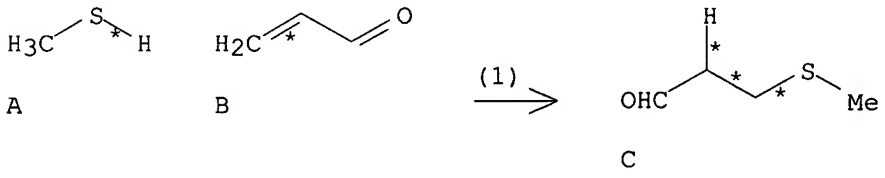
L47 ANSWER 4 OF 7 CASREACT COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 124:184625 CASREACT
TITLE: Process for the treatment and conditioning of solid or liquid effluents charged with heavy metals
INVENTOR(S): Leybros, Jean
PATENT ASSIGNEE(S): Commissariat a l'Energie Atomique, Fr.
SOURCE: Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 687483	A1	19951220	EP 1995-401367	19950613
EP 687483	B1	19980826		
R: BE, CH, DE, ES, GB, IT, LI, NL				
FR 2721237	A1	19951222	FR 1994-7297	19940615
FR 2721237	B1	19960802		
ES 2123221	T3	19990101	ES 1995-401367	19950613

PRIORITY APPLN. INFO.: FR 1994-7297 19940615

AB The effluent is treated with a reducing agent (e.g., SO2) and then contacted with an organic extractant (e.g., bis(2-ethylhexyl)phosphoric acid) and a hydrocarbon (e.g., hydrogenated tetrapropylene) for selective removal of the metal ions, followed by removing the heavy metals from the organic extract by a 2nd aqueous extraction, and precipitating and filtering the metals from the aqueous solution

RX(1) OF 1 A + **B** ===> **C**



A B C

RX(1) RCT A 74-93-1, B **107-02-8**
PRO C **3268-49-3**
NTE Classification: S-Alkylation; "1,4-Addition"; # Conditions: (AcO)2; <50 deg 2atm; # Comments: 4.7.49

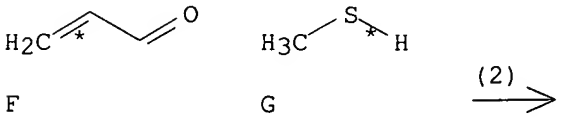
L47 ANSWER 5 OF 7 CASREACT COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 120:133858 CASREACT
TITLE: Process for producing 2-hydroxy-4-methylthiobutanoic acid
INVENTOR(S): Matsuoka, Kazuyuki

PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

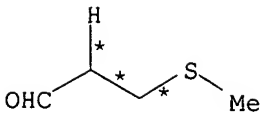
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9323372	A1	19931125	WO 1993-JP659	19930520
W: US				
RW: BE, DE, FR, GB				
JP 06049020	A2	19940222	JP 1993-143026	19930520
JP 3219544	B2	20011015		
EP 601195	A1	19940615	EP 1993-910360	19930520
EP 601195	B1	19960828		
R: BE, DE, FR, GB				
CN 1084511	A	19940330	CN 1993-107598	19930521
CN 1036391	B	19971112		
US 5386056	A	19950131	US 1994-178315	19940112
PRIORITY APPLN. INFO.:			JP 1992-155802	19920521
			WO 1993-JP659	19930520

AB A process for producing 2-hydroxy-4-methylthiobutanoic acid (I) together with methanol comprises hydrating 2-hydroxy-4-methylthiobutyronitrile (II) into 2-hydroxy-4-methylthiobutanamide (III), reacting the amide with Me formate to yield Me 2-hydroxy-4-methylthiobutanoate (IV) and formamide, and hydrolyzing the Me ester. The discharge of a large amount of ammonium sulfate can be prevented, because no sulfuric acid is used as the reactant. The byproduct formamide and methanol are utilizable as the starting material of the reaction after converting them into HCN and Me formate, resp. Thus, addition of MeSH to acrolein in the presence of Cu(OAc)2 and hydroquinone and addition of the resulting 3-methylthiopropionaldehyde with HCN in the presence of NaOH in MeOH gave II. Hydration of II in the presence of MnO2 in aqueous acetone at 60° for 6 h to give III which was reacted with HCO2Me in MeOH containing MeONa to give IV and the byproduct formamide. Hydrolysis of IV in the presence of Amberlyst 15 in H2O at 95° gave I, while the byproduct MeOH was recovered. Formamide was fed into a stainless steel reactor packed with alumina at 500° to give HCN. MeOH was contacted with a catalyst prepared from Cu(NO3)2 and ammonium chromate in a stainless steel reactor to give Me formate.

RX(2) OF 15 **F** + G ===> **H**...



F G



H
YIELD 89%

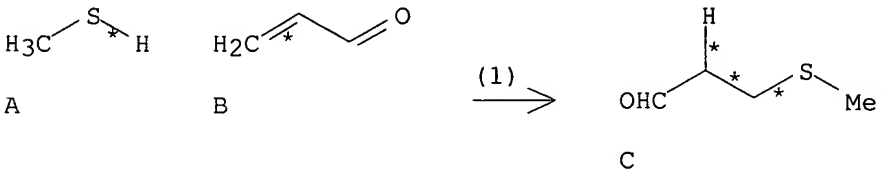
RX(2) RCT F **107-02-8**, G 74-93-1
PRO H **3268-49-3**
CAT 123-31-9 Hydroquinone, 142-71-2 Cu(OAc)2
NTE 20°

L47 ANSWER 6 OF 7 CASREACT COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 51:47157 CASREACT
TITLE: 3-(Methylthio)propanal
INVENTOR(S): Hunt, Madison; Merner, Richard R.
PATENT ASSIGNEE(S): E. I. du Pont de Nemours & Co.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2776996		19570108	US	

AB A mixture of MeSH (I) 440 and pyridine 16 is fed into acrolein 500 and HOAc 5 parts in an autoclave below 75°. The final portion of 3-(methylthio)-propanal (II) and I is added rapidly at 40° to give 91-7% II.

RX(1) OF 1 A + **B** ===> **C**



A B C

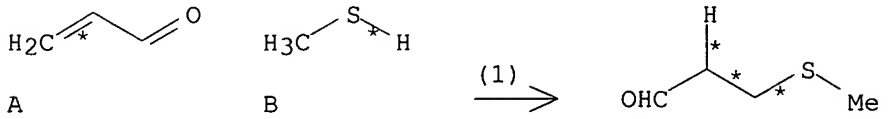
RX(1) RCT A 74-93-1, B **107-02-8**
PRO C **3268-49-3**
SOL 110-86-1 Pyridine, 64-19-7 AcOH
NTE Classification: S-Alkylation; "1,4-Addition"; # Conditions: MeSH pyridine AcOH; 70-75 deg; # Comments: high yield

L47 ANSWER 7 OF 7 CASREACT COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 42:25284 CASREACT
TITLE: Synthesis of DL-methionine
AUTHOR(S): Pierson, Earl; Giella, Mario; Tishler, Max
CORPORATE SOURCE: Merck & Co., Inc., Rahway, NJ
SOURCE: Journal of the American Chemical Society (1948), 70,

1450-1
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Addition of 48 g. MeSH to 56 g. CH2:CHCHO and 0.5 g. Cu(OAc)2 at 35-40° gives 84% MeSCH2CH2CHO (I), b11 52-4°, n20D 1.4850, d20 1.036 (2,4-dinitrophenylhydrazone, m. 116-19°). I (10.4 g.), shaken with 10.4 g. NaHSO3 in 35 mL. H2O, the product treated (in 3 portions) with 4.9 g. NaCN in 15 mL. H2O (temperature below 35°), the oil immediately extracted with C6H6, and the C6H6 extracted with NaHSO3, gives 90% α-hydroxy-β-(methylmercapto)butyronitrile (II), an oil that distilled at 100°/3 μ. I (26 g.), 113 g. (NH4)2CO3, 24.5 g. NaCN, 335 mL. EtOH, and 335 mL. H2O, heated 4 h. at 50-5°, and the filtrate concentrated to 300 mL. and heated 5 min. at 90° with 50 mL. concentrated HCl, give 79% 5-(2-methylmercaptoethyl)hydantoin (III), m. 103-5°; it results in 50% yield (based on I) from II and (NH4)2CO3 in 50% MeOH (2.5 h. at 50-5°). III (17.4 g.) and 8.8 g. NaOH in 75 mL. H2O, refluxed 6 h., an addnl. 4.4 g. NaOH added, and the refluxing continued for 18 h., give 10.6 g. DL-methionine (IV), m. 269° (decomposition); if I and III are not isolated, the yield (based on CH2:CHCHO) is 50%. II (123 g.), treated 30 min. at 60° with NH3, gives 40% of crude methionine nitrile, which could not be purified; hydrolysis by heating 5.5 h. on the steam bath with 20 mL. concentrated HCl yields 75% IV. Hydrolysis of III to IV was also effected by concentrated HCl at 135° and by (NH4)2S at 135°.

RX(1) OF 1 **A** + B ===> **C**



A B C

YIELD 85%

RX(1) RCT A **107-02-8**, B 74-93-1
RGT D 142-71-2 Cu(OAc)2
PRO C **3268-49-3**
NTE Classification: "1,4-Addition"; S-Alkylation; # Conditions: Cu(OAc)2 MeSH gas; 30mn 40 deg; 1h

=> => file registry
FILE 'REGISTRY' ENTERED AT 16:19:47 ON 21 APR 2006

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 20 APR 2006 HIGHEST RN 881372-94-7
DICTIONARY FILE UPDATES: 20 APR 2006 HIGHEST RN 881372-94-7

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* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*
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Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

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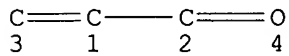
L35 STR



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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 4

STEREO ATTRIBUTES: NONE
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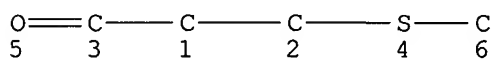
L38 STR



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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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NUMBER OF NODES IS 6

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STEREO ATTRIBUTES: NONE
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100.0% PROCESSED   10470 ITERATIONS                          10 ANSWERS
SEARCH TIME: 00.00.01


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L38              STR
L40           10 SEA FILE=REGISTRY FAM FUL L38
L43           81 SEA FILE=CAPLUS ABB=ON  PLU=ON  L40/PREP
L44         5388 SEA FILE=CAPLUS ABB=ON  PLU=ON  L37 (L) (RGT OR RCT OR RACT OR
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L45           34 SEA FILE=CAPLUS ABB=ON  PLU=ON  L44 AND L43


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L19       212936 SEA FILE=REGISTRY ABB=ON  PLU=ON  L6 AND CAPLUS/LC
L35              STR
L37          749 SEA FILE=REGISTRY FAM FUL L35
L38              STR
L40           10 SEA FILE=REGISTRY FAM FUL L38
L43           81 SEA FILE=CAPLUS ABB=ON  PLU=ON  L40/PREP
L44         5388 SEA FILE=CAPLUS ABB=ON  PLU=ON  L37 (L) (RGT OR RCT OR RACT OR
                 CAT)/RL
L45           34 SEA FILE=CAPLUS ABB=ON  PLU=ON  L44 AND L43
L46            1 SEA FILE=CAPLUS ABB=ON  PLU=ON  L45 AND L19


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1 L16
7 L47
L49 29 L48 NOT (L16 OR L47)

previously printed.

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L49 ANSWER 1 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2006:126607 CAPLUS
DOCUMENT NUMBER: 144:214741
TITLE: Method and catalysts for preparing 3-(methylthio)propanal from acrolein and methyl mercaptan and for the manufacture of 2-hydroxy-4-(methylthio)butanenitrile from it and hydrogen cyanide
INVENTOR(S): Dubner, Frank; Weckbecker, Christoph
PATENT ASSIGNEE(S): Germany
SOURCE: U.S. Pat. Appl. Publ., 8 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006030739	A1	20060209	US 2005-198609	20050805
WO 2006015684	A2	20060216	WO 2005-EP7666	20050714

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

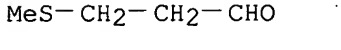
PRIORITY APPLN. INFO.: DE 2004-102004038053A 20040805
AB A method is described for preparing 3-(methylthio)propanal (I) by the the addition reaction of Me mercaptan to acrolein in the presence of macro-reticular resin catalysts containing pendant tertiary-amine groups [e.g., [(dimethylamino)methyl]styrene copolymer] to give I which is then reacted with HCN in the presence of the same catalyst to give 2-hydroxy-4-(methylthio)butanenitrile. Process flow diagrams are presented.
INCL 568063000
CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
Section cross-reference(s): 23, 48, 67
IT **3268-49-3P**, 3-(Methylthio)propanal

RL: EPR (Engineering process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); RCT (Reactant); **PREP (Preparation)**; PROC (Process); RACT (Reactant or reagent)
(method and catalysts for preparing 3-(methylthio)propanal from acrolein and Me mercaptan and for the manufacture of 2-hydroxy-4-(methylthio)butanenitrile from it and hydrogen cyanide)

IT 74-90-8, Hydrogen cyanide, reactions 74-93-1, Methyl mercaptan, reactions **107-02-8**, Acrolein, reactions
RL: EPR (Engineering process); PEP (Physical, engineering or chemical process); **RCT (Reactant)**; PROC (Process); **RACT (Reactant or reagent)**
(method and catalysts for preparing 3-(methylthio)propanal from acrolein and Me mercaptan and for the manufacture of 2-hydroxy-4-(methylthio)butanenitrile from it and hydrogen cyanide)

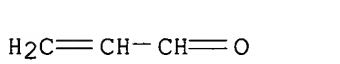
IT **3268-49-3P**, 3-(Methylthio)propanal
RL: EPR (Engineering process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); RCT (Reactant); **PREP (Preparation)**; PROC (Process); RACT (Reactant or reagent)
(method and catalysts for preparing 3-(methylthio)propanal from acrolein and Me mercaptan and for the manufacture of 2-hydroxy-4-(methylthio)butanenitrile from it and hydrogen cyanide)

RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)



IT **107-02-8**, Acrolein, reactions
RL: EPR (Engineering process); PEP (Physical, engineering or chemical process); **RCT (Reactant)**; PROC (Process); **RACT (Reactant or reagent)**
(method and catalysts for preparing 3-(methylthio)propanal from acrolein and Me mercaptan and for the manufacture of 2-hydroxy-4-(methylthio)butanenitrile from it and hydrogen cyanide)

RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)



L49 ANSWER 2 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:547378 CAPLUS
DOCUMENT NUMBER: 143:61750
TITLE: Method for the separation of methyl mercaptan from reaction gas mixtures
INVENTOR(S): Moller, Alexander; Bock, Wolfgang; Rautenberg, Stephan; Hasselbach, Hans-Joachim; Taugner, Wolfgang; Heinzel, Harald; Zarfl, Theo
PATENT ASSIGNEE(S): Germany
SOURCE: U.S. Pat. Appl. Publ., 4 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

US 2005137426	A1	20050623	US 2004-16130	20041217
DE 10359636	A1	20050728	DE 2003-10359636	20031218
WO 2005058809	A1	20050630	WO 2004-EP13565	20041130

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: DE 2003-10359636 A 20031218

AB A method for the separation of Me mercaptan from reaction mixts. created in the catalytic conversion of hydrogen sulfide with methanol, is described in which: (A) the portions of non-converted hydrogen sulfide and methanol, as well as the water contained in the reaction mixture, are separated; (B) the raw Me mercaptan obtained is subsequently converted with 3-(methylmercapto)propionaldehyde (MMP) and acrolein, or converted into MMP solely with acrolein in the presence of a catalyst; and (C) the components from the Me mercaptan synthesis still present in the reaction mixture are separated from the MMP in a distillation process. A process flow diagram is presented.

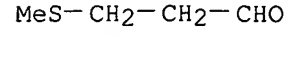
IC ICM C07C319-08
INCL 568071000
CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
Section cross-reference(s): 23, 48

IT **3268-49-3P**, 3-(Methylmercapto)propionaldehyde
RL: EPR (Engineering process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); **PREP (Preparation)**; PROC (Process)
(in a method for the separation of Me mercaptan from reaction gas mixts.)

IT **107-02-8**, Acrolein, reactions
RL: EPR (Engineering process); PEP (Physical, engineering or chemical process); **RCT (Reactant)**; PROC (Process); **RACT (Reactant or reagent)**
(in a method for the separation of Me mercaptan from reaction gas mixts.)

IT **3268-49-3P**, 3-(Methylmercapto)propionaldehyde
RL: EPR (Engineering process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); **PREP (Preparation)**; PROC (Process)
(in a method for the separation of Me mercaptan from reaction gas mixts.)

RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)



IT **107-02-8**, Acrolein, reactions
RL: EPR (Engineering process); PEP (Physical, engineering or chemical process); **RCT (Reactant)**; PROC (Process); **RACT (Reactant or reagent)**
(in a method for the separation of Me mercaptan from reaction gas mixts.)

RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)

$H_2C{=}CH{-}CH{=}O$

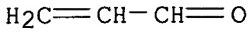
L49 ANSWER 3 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:115071 CAPLUS
DOCUMENT NUMBER: 134:165268
TITLE: Reductive combustion of ammonium salts of sulfuric acid
INVENTOR(S): Lorbert, Stephen J.; Willock, James M.; Irvine, Lewis B.; Kapila, Shubhender; Flanigan, Virgil J.; Nam, Paul K. S.; Liske, Yvonne M.
PATENT ASSIGNEE(S): Novus International, Inc., USA
SOURCE: PCT Int. Appl., 99 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001010776	A1	20010215	WO 2000-US21493	20000804
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6342651	B1	20020129	US 2000-632999	20000804
PRIORITY APPLN. INFO.:			US 1999-147751P	P 19990805

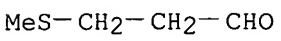
AB A process is provided for the combustion of ammonium salts of sulfuric acid contained in aqueous media. More particularly, a reductive combustion process produces a combustion gas containing a divalent sulfur compound having a high concentration of hydrogen sulfide. The process is suitable for combusting ammonium salts of sulfuric acid produced during manufacture of 2-hydroxy-4-methylthiobutanoic acid (HMBA) or methionine. The divalent sulfur compds. in the combustion gas may be further converted to other useful sulfur products and recycled for use in the manufacture of HMBA or methionine.

IC ICM C01B017-28
CC 49-10 (Industrial Inorganic Chemicals)
Section cross-reference(s): 45
IT 67-56-1, Methanol, reactions 74-90-8, Hydrogen cyanide, reactions **107-02-8**, Acrolein, reactions 7664-41-7, Ammonia, reactions 7664-93-9, Sulfuric acid, reactions 7722-84-1, Hydrogen peroxide, reactions 7783-20-2, Ammonium sulfate, reactions 7803-63-6, Ammonium bisulfate 10043-02-4, Sulfuric acid, Ammonium salt
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(reductive combustion of ammonium salts of sulfuric acid)
IT **3268-49-3P**, 3-Methylthiopropanal 17773-41-0P, 2-Hydroxy-4-methylthiobutanenitrile
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(reductive combustion of ammonium salts of sulfuric acid)

IT **107-02-8**, Acrolein, reactions
RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**
(reductive combustion of ammonium salts of sulfuric acid)
RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)



IT **3268-49-3P**, 3-Methylthiopropanal
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(reductive combustion of ammonium salts of sulfuric acid)
RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L49 ANSWER 4 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:112320 CAPLUS
DOCUMENT NUMBER: 134:164826
TITLE: Manufacture of acrolein and acrolein derivatives from Diels-Alder reaction or Michael addition
INVENTOR(S): Etzkorn, William George; Galley, Richard A.; Snead, Thomas E.; Brockwell, Jonathan Lester; Young, Mark Anderson; Maher, John Michael; Warren, Barbara Knight
PATENT ASSIGNEE(S): Union Carbide Chemicals and Plastics Technology Corporation, USA
SOURCE: U.S., 11 pp., Cont.-in-part of WO9736848.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6187963	B1	20010213	US 1998-169798	19981009
WO 9736848	A1	19971009	WO 1997-US5100	19970327
W: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
RW: AU, BB, BG, BR, CA, CN, CZ, HU, IS, JP, KP, KR, LK, LR, LV, MK, MX, NO, NZ, PL, SG, SI, TR, TT, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
EP 891316	A1	19990120	EP 1997-917687	19970327
EP 891316	B1	20030521		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI				

PRIORITY APPLN. INFO.:

EP 1997-917687	A	19970327
WO 1997-US5100	A2	19970327
US 1996-14507P	P	19960401
US 1996-14510P	P	19960401
US 1996-14678P	P	19960401

AB A process for producing an acrolein derivative comprises (i) passing a propylene feed stream comprising propylene, oxygen, and a recycle gas comprising propane, oxygen, and at least one of carbon monoxide and carbon dioxide to an acrolein reaction zone wherein the propylene feed stream is contacted with an acrolein reaction catalyst at conditions effective to promote the formation of acrolein to provide an acrolein effluent stream comprising acrolein, propane, acetaldehyde and water; (ii) passing the acrolein effluent stream to an acrolein separation zone wherein the acrolein effluent stream is partially condensed to provide a liquid acrolein product stream comprising acrolein, acetaldehyde, and water and a recycle gas stream comprising the recycle gas; (iii) passing the acrolein product stream and a co-reactant capable of undergoing a Diels-Alder reaction or Michael addition with acrolein to an acrolein derivative reaction zone and contacting the acrolein and co-reactant under conditions effective to convert the acrolein and the co-reactant into an acrolein derivative; and (iv) recycling at least a portion of the recycle gas stream to the acrolein reaction zone. The process is characterized in that the propylene feed stream comprises an amount of propane of from about 5 to 70 volume% and effective to provide a propylene-to-acrolein reaction efficiency of from about 75 to 90 mol%.

IC C07C027-10; C07C045-27; C07C045-32

INCL 568469900

CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
Section cross-reference(s): 23

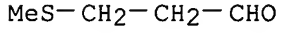
IT 100-73-2P, 2-Formyl-3,4-dihydro-2H-pyran 108-99-6P, β-Picoline 110-86-1P, Pyridine, preparation 111-30-8P, Glutaraldehyde 504-63-2P, 1,3-Propanediol 1321-16-0P, Tetrahydrobenzaldehyde **3268-49-3P**, 3-(Methylthio)propanal 31906-04-4P, 4-(4-Hydroxy-4-methylpentyl)-3-cyclohexene-1-carboxaldehyde 75454-86-3P 84315-07-1P
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(manufacture of acrolein and acrolein derivs. from Diels-Alder reaction or Michael addition)

IT **107-02-8P**, Acrolein, preparation 2134-29-4P, 3-Hydroxypropionaldehyde 4454-05-1P, 2-Methoxy-3,4-dihydro-2H-pyran
RL: IMF (Industrial manufacture); **RCT (Reactant)**; PREP (Preparation); **RACT (Reactant or reagent)**
(manufacture of acrolein and acrolein derivs. from Diels-Alder reaction or Michael addition)

IT **3268-49-3P**, 3-(Methylthio)propanal
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(manufacture of acrolein and acrolein derivs. from Diels-Alder reaction or Michael addition)

RN 3268-49-3 CAPLUS

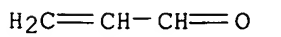
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)



IT **107-02-8P**, Acrolein, preparation
RL: IMF (Industrial manufacture); **RCT (Reactant)**; PREP (Preparation); **RACT (Reactant or reagent)**
(manufacture of acrolein and acrolein derivs. from Diels-Alder reaction or Michael addition)

RN 107-02-8 CAPLUS

CN 2-Propenal (9CI) (CA INDEX NAME)



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L49 ANSWER 5 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:909250 CAPLUS
DOCUMENT NUMBER: 134:43711
TITLE: Oxidative processes for the manufacture of acrolein from propylene and oxygen
INVENTOR(S): Etzkorn, William George; Brockwell, Jonathan Lester; Young, Mark Anderson; Maher, John Michael; Warren, Barbara Knight
PATENT ASSIGNEE(S): Union Carbide Chemicals and Plastics Technology Corporation, USA
SOURCE: U.S., 10 pp., Cont.-in-part of Appl. No. PCT/US97/05100.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6166263	A	20001226	US 1998-169335	19981009
WO 9736848	A1	19971009	WO 1997-US5100	19970327

W: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
RW: AU, BB, BG, BR, CA, CN, CZ, HU, IS, JP, KP, KR, LK, LR, LV, MK, MX, NO, NZ, PL, SG, SI, TR, TT, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

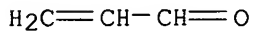
PRIORITY APPLN. INFO.:

WO 1997-US5100	A2	19970327
US 1996-14507P	P	19960401
US 1996-14510P	P	19960401
US 1996-14678P	P	19960401

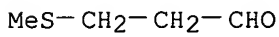
AB Acrolein is produced in high yield and selectivity in a process comprising: (i) passing a propylene feedstream comprising propylene, oxygen and a recycle gas comprising propane, oxygen and carbon monoxide and/or carbon dioxide to an acrolein reaction zone where the propylene feedstream is contacted with an acrolein reaction catalyst to provide an acrolein effluent stream comprising acrolein, propane, acetaldehyde and water; (ii) passing the acrolein effluent stream to an acrolein separation zone where the acrolein effluent stream is partially condensed to provide a liquid acrolein product stream comprising acrolein, acetaldehyde and water and a recycle gas stream comprising the recycle gas; and (iii) recycling a portion of the recycle gas stream to the acrolein reaction zone. The propylene feedstream comprises 5-70 volume% propane and is effective to provide a propylene-to-acrolein reaction efficiency of 75-90 mol%. The presence of propane in the propylene-to-acrolein reaction can enhance the efficiency of the processes.

IC C07C045-32
INCL 568469900
CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
Section cross-reference(s): 23, 48
IT **107-02-8P**, Acrolein, preparation
RL: IMF (Industrial manufacture); **RCT (Reactant)**; PREP (Preparation); **RACT (Reactant or reagent)**
(oxidative processes for the manufacture of acrolein from propylene and oxygen)

IT 78-19-3P 100-73-2P, 2-Formyl-3,4-dihydro-2H-pyran 504-63-2P, 1,3-Propanediol 1321-16-0P, Tetrahydrobenzaldehyde 2806-84-0P, 3-(Methoxy)propionaldehyde **3268-49-3P** 4454-05-1P, 2-Methoxy-3,4-dihydro-2H-pyran 31906-04-4P, 4-(4-Hydroxy-4-methylpentyl)-3-cyclohexene-1-carboxaldehyde 84315-07-1P
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
IT **107-02-8P**, Acrolein, preparation
RL: IMF (Industrial manufacture); **RCT (Reactant)**; PREP (Preparation); **RACT (Reactant or reagent)**
(oxidative processes for the manufacture of acrolein from propylene and oxygen)
RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)



IT **3268-49-3P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L49 ANSWER 6 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:535110 CAPLUS
DOCUMENT NUMBER: 133:150414
TITLE: Synthesis of oligoketides
INVENTOR(S): Ashley, Gary; Chan-Kai, Isaac Chu-Wah; Burlingame, Mark Alma
PATENT ASSIGNEE(S): Kosan Biosciences, Inc., USA
SOURCE: PCT Int. Appl., 87 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000044717	A2	20000803	WO 2000-US2397	20000127
WO 2000044717	A3	20010208		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2361040	AA	20000803	CA 2000-2361040	20000127
EP 1144375	A2	20011017	EP 2000-911673	20000127

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

JP 2002535387	T2	20021022	JP 2000-595973	20000127
US 6492562	B1	20021210	US 2000-492733	20000127
US 2003096374	A1	20030522	US 2002-214653	20020807
US 2003092140	A1	20030515	US 2002-215964	20020808
US 7022825	B2	20060404		

PRIORITY APPLN. INFO.:	US 1999-117384P	P	19990127
	US 2000-492733	A3	20000127
	WO 2000-US2397	W	20000127

OTHER SOURCE(S): CASREACT 133:150414

AB Diketide and triketide thioesters were prepared by The method comprises (a) treating benzoxazolinone derivative of diketide or triketide with salt of thiol anion form N-acyl cysteamine thioester of diketide or triketide; (b) treating 2-oxazolidinone derivative of diketide or triketide with lithium salt of thiol anion in the presence of sufficient Lewis acid (trimethylammonium) form N-acyl cysteamine thioester of diketide or triketide. The resulting thioesters may be used as intermediates in the synthesis of desired polyketides by treating a polyketide synthase (PKS) enzyme complex with diketide or polyketide thioester, and may contain functional groups which ultimately reside in side chains on the resulting polyketide and thus can be used further to manipulate the polyketide so as to form derivs. The polyketides produced may also be tailored by glycosylation, hydroxylation and the like by treating polyketide with tailoring enzymes. The method can be used to synthesize oligoketide thioester on a solid support which comprises (1) reacting an N-acyl-2-imidazolidinone coupled to solid support with an aldehyde or acyl moiety under conditions whereby aldehyde or acyl moiety couples to a position α to a carbonyl in the acyl group of the 2-imidazolidinone; (2) optionally repeating step (1); (3) cleaving the resulting oligoketide from solid support by reaction with lithium salt of thiol anion in the presence of Lewis acid providing oligoketide thioester. Or alternately by (1)reacting an N-acyl benzoxazolone coupled to solid support with an aldehyde under conditions whereby aldehyde couples to a position α to carbonyl in the acyl group of the benzoxalozone; (2) optionally repeating step (1); (3) cleaving the resulting oligoketide from the solid support by reaction with salt of thiol anion, providing oligoketide thioester. Thus, propionyl oxazolidinone mixed with anhydrous dichloromethane, flushed with nitrogen, cooled to -15°C in methanol/ice bath; Dibutylboron triflate(in dichloromethane) and diisopropylethylamine were added slowly and resp. to the reaction mixture while keeping temperature below 3°C; After that cooled the temperature to -65°C using dry ice /isopropanol bath, acrolein was added over 5 min by syringe, stirring the reaction mixture for 30 min, after that 1 M aqueous phosphate solution(pH 7.0), methanol, and 2:1 methanol-30% hydrogen peroxide were added resp. as quickly as possible while keeping the temperature below 10°C, the reaction stirred for one more hour, then removed the solvent by rotary evaporation until a slurry remained, further purification giving the desired product (4S)-N-[(2S,3R)-2-methyl-3-hydroxy-4-pentenoyl]-4-benzyl-2-oxazolidinone. 15-Fluoro-6-deoxyerythronolide B was prepd by feeding (2S,3R)-5-fluoro-3-hydroxy-2-methylpentanoate N-acetyl-cysteamine thioester to S. coelicolor CH999/pJRJ2.

IC ICM C07C327-00

CC 26-6 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 1, 7, 9, 10

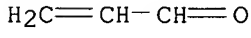
IT 59-49-4, 2(3H)-Benzoxazolone 85-41-6, Phthalimide 95-25-0, Chlorzoxazone 100-46-9, Benzylamine, reactions 100-52-7, Benzaldehyde, reactions 104-53-0, 3-Phenylpropanal **107-02-8**, Acrolein,

reactions 108-94-1, Cyclohexanone, reactions 123-72-8, Butyraldehyde 123-73-9, trans-Crotonaldehyde 141-75-3, Butyryl chloride 156-57-0, Cysteamine hydrochloride 352-91-0, 1-Bromo-3-fluoropropane 406-87-1, 4,4,4-Trifluorobutyraldehyde 407-83-0 462-43-1, 3-Fluoropropanol 462-74-8 500-22-1, Pyridine-3-carboxaldehyde 625-35-4, trans-Crotonyl chloride 630-19-3, Trimethylacetaldehyde 1450-85-7, 2-Mercaptopyrimidine 1489-69-6, Cyclopropanecarboxaldehyde 2100-17-6, 4-Penten-1-al 2975-46-4, 3-Trimethylsilylpropargyl aldehyde 7550-45-0, Titanium tetrachloride, reactions 19434-65-2, 3-Chloropropanal 58503-60-9, 3-Azidopropanal 60656-87-3, Benzyloxyacetaldehyde 65032-54-4, 3-Bromopropanal 79956-01-7, Polyketide synthase 101711-78-8 101712-01-0 111964-99-9 155957-56-5 183064-83-7 287398-55-4 287398-56-5 287398-57-6 287398-58-7 287398-59-8 287398-60-1 287398-64-5
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(synthesis of oligoketides)

IT 123-38-6P, Propionaldehyde, preparation 1190-73-4P, N-Acetylcysteamine 1420-88-8P, N,S-Diacetylcysteamine 2436-29-5P **3268-49-3P**, 3-(Methylthio)propionaldehyde 33388-19-1P 77063-66-2P, 3-Fluoropropanal 89436-27-1P 89436-29-3P 101711-79-9P 115444-28-5P 124439-37-8P 139426-88-3P 197640-48-5P 209671-25-0P 220081-70-9P 220081-71-0P 287398-61-2P 287398-62-3P 287398-63-4P 287398-65-6P 287398-66-7P 287398-68-9P 287398-69-0P 287398-70-3P 287398-71-4P 287398-72-5P 287398-73-6P 287398-74-7P 287398-75-8P 287398-76-9P 287398-77-0P 287398-78-1P 287398-79-2P 287398-81-6P 287398-82-7P 287398-83-8P 287398-84-9P 287398-85-0P 287398-86-1P 287398-87-2P 287398-88-3P 287398-89-4P 287398-90-7P 287398-91-8P 287398-92-9P 287398-93-0P 287398-94-1P 287398-95-2P 287398-96-3P 287398-97-4P 287398-98-5P 287398-99-6P 287399-00-2P 287399-01-3P 287399-02-4P 287399-03-5P 287399-04-6P 287399-05-7P 287399-06-8P 287399-07-9P
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(synthesis of oligoketides)

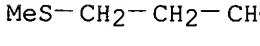
IT **107-02-8**, Acrolein, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(synthesis of oligoketides)

RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)



IT **3268-49-3P**, 3-(Methylthio)propionaldehyde
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(synthesis of oligoketides)

RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)



L49 ANSWER 7 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:289080 CAPLUS
DOCUMENT NUMBER: 132:309995
TITLE: Processes for the manufacture of 3-(methylthio)propanal

INVENTOR(S): Brockwell, Jonathan L.; Young, Mark A.; Etzkorn, William G.; Warren, Barbara K.; Maher, John M.
PATENT ASSIGNEE(S): Union Carbide Chemicals & Plastics Technology Corporation, USA
SOURCE: U.S., 12 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

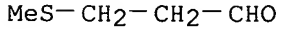
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6057481	A	20000502	US 1998-155750	19981001
WO 9736848	A1	19971009	WO 1997-US5100	19970327
W: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
RW: AU, BB, BG, BR, CA, CN, CZ, HU, IS, JP, KP, KR, LK, LR, LV, MK, MX, NO, NZ, PL, SG, SI, TR, TT, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
AU 9725947	A1	19971022	AU 1997-25947	19970327
JP 2002503206	T2	20020129	JP 1997-535453	19970327
JP 3490459	B2	20040126		
AT 240924	E	20030615	AT 1997-917687	19970327

PRIORITY APPLN. INFO.:

US 1996-14507P	P	19960401
US 1996-14510P	P	19960401
US 1996-14678P	P	19960401
WO 1997-US5100	W	19970327

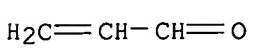
AB A process for the conversion of propylene to 3-(methylthio)propanal (I) by converting propylene to acrolein and converting the acrolein with Me mercaptan to I is described. The processes utilize oxygen and recycle propane to the acrolein reactor. The process feeds can comprise, propane, propylene or their mixts. The presence of propane in the propylene-to-acrolein reaction can enhance the efficiency of the processes.

IC ICM C07C319-02
INCL 568041000
CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
Section cross-reference(s): 23, 48
IT **3268-49-3P**, 3-(Methylthio)propanal
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(processes for the manufacture of 3-(methylthio)propanal)
IT **107-02-8P**, Acrolein, preparation 115-07-1P, Propene, preparation
RL: IMF (Industrial manufacture); **RCT (Reactant)**; PREP (Preparation); **RACT (Reactant or reagent)**
(processes for the manufacture of 3-(methylthio)propanal)
IT **3268-49-3P**, 3-(Methylthio)propanal
RL: IMF (Industrial manufacture); **PREP (Preparation)**
(processes for the manufacture of 3-(methylthio)propanal)
RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)



IT **107-02-8P**, Acrolein, preparation
RL: IMF (Industrial manufacture); **RCT (Reactant)**; PREP (Preparation); **RACT (Reactant or reagent)**

(processes for the manufacture of 3-(methylthio)propanal)
RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L49 ANSWER 8 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:450926 CAPLUS
DOCUMENT NUMBER: 131:89346
TITLE: Continuous process for the preparation of 3-(methylthio)propanal from acrolein and methyl mercaptan
INVENTOR(S): Hsu, Yung C.; Ruest, Dennis A.
PATENT ASSIGNEE(S): Novus International, Inc., USA
SOURCE: U.S., 26 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5925794	A	19990720	US 1996-668572	19960620
US 5352837	A	19941004	US 1993-73763	19930608
US 5637766	A	19970610	US 1995-557699	19951113
CN 1188470	A	19980722	CN 1996-194943	19960621
CN 1120834	B	20030910		
US 6031138	A	20000229	US 1998-102025	19980622
US 6320076	B1	20011120	US 1999-470407	19991222

PRIORITY APPLN. INFO.:

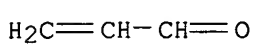
US 1993-73763	A2	19930608
US 1994-273216	B1	19940711
US 1995-421P	P	19950622
US 1995-557699	A2	19951113
US 1996-667099	B1	19960620
US 1996-668572	B1	19960620
US 1998-102025	A3	19980622

AB 3-(Methylthio)propanal (I) is prepared in a continuous process in which a liquid reaction medium (containing I, Me mercaptan, and an addition reaction catalyst) is contacted with a gaseous acrolein feed stream (containing acrolein vapor and noncondensable gas) in a gas-liquid contact zone. Acrolein is transferred from the acrolein feed stream to the reaction medium and reacted with Me mercaptan in that medium to produce a liquid reaction product containing I. The noncondensable gas is separated from the liquid reaction product, the reaction product is divided into a product fraction and a circulating fraction, and the circulating fraction is recycled to the gas-liquid contact zone. Process flow diagrams are presented.
IC ICM C07C319-00
INCL 568041000
CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
Section cross-reference(s): 23, 48
IT **107-02-8P**, 2-Propenal, preparation **3268-49-3P**, 3-(Methylthio)propanal 59121-24-3P, 4-(Methylthio)butyronitrile
RL: IMF (Industrial manufacture); **RCT (Reactant); PREP**

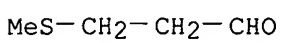
(Preparation); RACT (Reactant or reagent)
(continuous process for the preparation of 3-(methylthio)propanal from acrolein and Me mercaptan)

IT **107-02-8P**, 2-Propenal, preparation **3268-49-3P**, 3-(Methylthio)propanal
RL: IMF (Industrial manufacture); **RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)**
(continuous process for the preparation of 3-(methylthio)propanal from acrolein and Me mercaptan)

RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)



RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L49 ANSWER 9 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:111227 CAPLUS
DOCUMENT NUMBER: 126:117741
TITLE: Processes and catalysts for the preparation of 3-(methylthio)propanal and 2-hydroxy-4-(methylthio)butanenitrile
INVENTOR(S): Blackburn, Thomas F.; Pellegrin, Paul F.; Kranz, Allen H.
PATENT ASSIGNEE(S): Novus International, Inc., USA
SOURCE: PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9640631	A1	19961219	WO 1996-US9060	19960604
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML				
US 5663409	A	19970902	US 1995-476356	19950607
US 5705675	A	19980106	US 1995-581249	19951229
AU 9659873	A1	19961230	AU 1996-59873	19960604
AU 714151	B2	19991223		
EP 830341	A1	19980325	EP 1996-917222	19960604
EP 830341	B1	20010905		
R: BE, DE, DK, ES, FR, GB, IT, LU, NL, MC, PT, IE				
JP 11511119	T2	19990928	JP 1997-501471	19960604
RU 2173681	C2	20010920	RU 1998-100220	19960604

PRIORITY APPLN. INFO.: US 1995-476356 A 19950607
US 1995-581249 A 19951229
WO 1996-US9060 W 19960604

OTHER SOURCE(S): MARPAT 126:117741

AB 3-(Methylthio)propanal (I) is prepared by the addition reaction of MeSH with acrolein, 2-hydroxy-4-(methylthio)butanenitrile is prepared by the addition reaction of I with HCN, and both reactions are conducted in the presence of an addition reaction catalysts comprising ≥1 organic base(s) (e.g., triisopropanolamine, nicotinamide, imidazole, benzimidazole, 2-fluoropyridine, poly-4-vinylpyridine, 4-dimethylaminopyridine, picoline, pyrazine, trialkylamines, etc.).

IC ICM C07C319-18
ICS C07C319-20; C07C323-22; C07C323-60

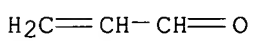
CC 23-19 (Aliphatic Compounds)
Section cross-reference(s): 45, 67

IT 64-19-7, Acetic acid, reactions 74-90-8, Hydrogen cyanide, reactions 74-93-1, Methanethiol, reactions **107-02-8**, Acrolein, reactions 7664-38-2, Phosphoric acid, reactions 7664-93-9, Sulfuric acid, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(processes and catalysts for the preparation of 3-(methylthio)propanal and 2-hydroxy-4-(methylthio)butanenitrile)

IT **3268-49-3P**, 3-(Methylthio)propanal
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(processes and catalysts for the preparation of 3-(methylthio)propanal and 2-hydroxy-4-(methylthio)butanenitrile)

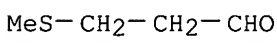
IT **107-02-8**, Acrolein, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(processes and catalysts for the preparation of 3-(methylthio)propanal and 2-hydroxy-4-(methylthio)butanenitrile)

RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)



IT **3268-49-3P**, 3-(Methylthio)propanal
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(processes and catalysts for the preparation of 3-(methylthio)propanal and 2-hydroxy-4-(methylthio)butanenitrile)

RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)



L49 ANSWER 10 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:537082 CAPLUS
DOCUMENT NUMBER: 125:167345
TITLE: Preparation of 2-hydroxy-4-(methylmercapto)butyric acid from acrolein and methyl mercaptan without using sulfuric acid
INVENTOR(S): Matsuoka, Kazuyuki
PATENT ASSIGNEE(S): Daicel Chem, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08157447	A2	19960618	JP 1993-159132	19930629
JP 3169103	B2	20010521		
PRIORITY APPLN. INFO.:			JP 1993-159132	19930629

AB MeS(CH2)2CH(OH)CO2H (I), which is used as a feed additive, is prepared from CH2:CHCHO and MeSH, via MeS(CH2)2CHO, MeS(CH2)2CH(OH)CN (II), MeS(CH2)2CH(OH)CONH2 (III), and esters of MeS(CH2)2CH(OH)CO2H. Hydration of II in aqueous Me2CO in the presence of MnO2 at 60° for 6 h gave 89.0% III, which was autoclaved with MeOH and Pb nitrate at 170° and 20 kg/cm2 for 5 h with removing NH3 to afford MeS(CH2)2CH(OH)CO2Me at 83% conversion and 85% selectivity. Hydrolysis of the ester with Amberlyst 15 in H2O at 95° for 5 h gave I at 98.8% conversion and 97.1% selectivity.

IC ICM C07C323-52
ICS C07C319-18; C07C319-20

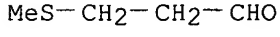
CC 23-17 (Aliphatic Compounds)
Section cross-reference(s): 17

IT **3268-49-3P**, 3-(Methylmercapto)propionaldehyde 17773-41-0P, 2-Hydroxy-4-(methylthio)butyronitrile 49540-21-8P, 2-Hydroxy-4-(methylthio)butyramide 52703-96-5P
RL: IMF (Industrial manufacture); RCT (Reactant); **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation of hydroxy(methylmercapto)butyric acid from acrolein and Me mercaptan without using sulfuric acid)

IT 74-93-1, Methyl mercaptan, reactions **107-02-8**, 2-Propenal, reactions
RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**
(preparation of hydroxy(methylmercapto)butyric acid from acrolein and Me mercaptan without using sulfuric acid)

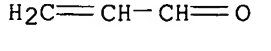
IT **3268-49-3P**, 3-(Methylmercapto)propionaldehyde
RL: IMF (Industrial manufacture); RCT (Reactant); **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation of hydroxy(methylmercapto)butyric acid from acrolein and Me mercaptan without using sulfuric acid)

RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)



IT **107-02-8**, 2-Propenal, reactions
RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**
(preparation of hydroxy(methylmercapto)butyric acid from acrolein and Me mercaptan without using sulfuric acid)

RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)

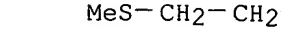


L49 ANSWER 11 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:252233 CAPLUS
DOCUMENT NUMBER: 124:288769
TITLE: Preparation of 3-(methylthio)propanal
INVENTOR(S): Hsu, Yung C.; Ruest, Dennis A.
PATENT ASSIGNEE(S): Novus International, Inc., USA
SOURCE: PCT Int. Appl., 70 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9601810	A1	19960125	WO 1995-US8532	19950706
W: AM, AT, AU, BB, BG, BR, BY, CA, CN, CZ, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, TJ, TM, TT, UA, UG, UZ, VN				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9530939	A1	19960209	AU 1995-30939	19950706
AU 699841	B2	19981217		
EP 770062	A1	19970502	EP 1995-926631	19950706
R: BE, DE, DK, ES, FR, GB, IE, IT, LU, MC, NL, PT				
CN 1152913	A	19970625	CN 1995-194068	19950706
JP 10504812	T2	19980512	JP 1996-504405	19950706
RU 2149159	C1	20000520	RU 1997-102147	19950706
CN 1222507	A	19990714	CN 1998-115072	19980624
PRIORITY APPLN. INFO.:			US 1994-273216 A	19940711
			WO 1995-US8532 W	19950706

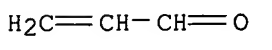
AB The title process comprises condensation of CH2:CHCHO from a feed stream in a gas/liquid contact zone containing MeSCH2CH2CHO, MeSH, and catalyst, separation of non-condensable material from the feed stream, and withdrawal of liquid which is divided into a product stream and a stream which is returned to the gas/liquid contact zone.

IC ICM C07C323-50
ICS C07C323-51
CC 23-14 (Aliphatic Compounds)
IT **3268-49-3P**, 3-(Methylthio)propanal
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of 3-(methylthio)propanal)
IT 74-93-1, Methanethiol, reactions **107-02-8**, Acrolein, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(preparation of 3-(methylthio)propanal)
IT **3268-49-3P**, 3-(Methylthio)propanal
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of 3-(methylthio)propanal)
RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)



IT **107-02-8**, Acrolein, reactions

RL: **RCT (Reactant); RACT (Reactant or reagent)**
(preparation of 3-(methylthio)propanal)
RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)



L49 ANSWER 12 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:183935 CAPLUS
DOCUMENT NUMBER: 122:9491
TITLE: Continuous process for preparation of 3-(methylthio)propanal from a gaseous acrolein feed stream
INVENTOR(S): Hsu, Yung C.; Ruest, Dennis A.
PATENT ASSIGNEE(S): Novus International, Inc., USA
SOURCE: U.S., 16 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5352837	A	19941004	US 1993-73763	19930608
ZA 9305850	A	19940525	ZA 1993-5850	19930811
WO 9429254	A1	19941222	WO 1993-US8552	19930909
W: AT, AU, BB, BG, BR, BY, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9351268	A1	19950103	AU 1993-51268	19930909
AU 673856	B2	19961128		
BR 9307864	A	19960123	BR 1993-7864	19930909
EP 703890	A1	19960403	EP 1993-922171	19930909
EP 703890	B1	19990407		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 09501145	T2	19970204	JP 1993-501709	19930909
RU 2118314	C1	19980827	RU 1996-100238	19930909
EP 889029	A2	19990107	EP 1998-114518	19930909
EP 889029	A3	20020313		
R: BE, DE, DK, ES, FR, GB, IT, LU, NL, MC, PT, IE				
AT 178594	E	19990415	AT 1993-922171	19930909
ES 2131120	T3	19990716	ES 1993-922171	19930909
CN 1096779	A	19941228	CN 1993-118591	19931009
CN 1041414	B	19981230		
US 5637766	A	19970610	US 1995-557699	19951113
US 5925794	A	19990720	US 1996-668572	19960620
US 5744647	A	19980428	US 1996-679701	19960711
US 6031138	A	20000229	US 1998-102025	19980622
US 6320076	B1	20011120	US 1999-470407	19991222
US 2002173677	A1	20021121	US 2001-972748	20011005
US 6548701	B2	20030415		

PRIORITY APPLN. INFO.:		
US 1993-73763	A	19930608
EP 1993-922171	A3	19930909
WO 1993-US8552	W	19930909

US 1994-273216	B1	19940711
US 1995-421P	P	19950622
US 1995-557699	A2	19951113
US 1996-667099	B1	19960620
US 1996-668572	B1	19960620
US 1998-102025	A3	19980622
US 1999-470407	A1	19991222

AB A process for the continuous preparation of 3-(methylthio)propanal. A liquid reaction medium is contacted with a gaseous acrolein feed stream in a gas/liquid contact zone. The reaction medium contains 3-(methylthio)propanal, Me mercaptan and a catalyst for the reaction between Me mercaptan and acrolein. The gaseous acrolein feed stream comprises acrolein vapor and non-condensable gas. Acrolein is transferred from the acrolein feed stream to the reaction medium and reacts with Me mercaptan in that medium to produce a liquid reaction product containing 3-(methylthio)propanal. The non-condensable gas is separated from the liquid reaction product. The reaction product is divided into a product fraction and a circulating fraction, and the circulating fraction is recycled to the gas/liquid contact zone.

IC ICM C07C323-50
ICS C07C323-51

INCL 568041000

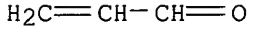
CC 23-14 (Aliphatic Compounds)
Section cross-reference(s): 45

IT **107-02-8P**, Acrolein, preparation
RL: IMF (Industrial manufacture); **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(continuous process for preparation of 3-(methylthio)propanal from a gaseous acrolein feed stream)

IT **3268-49-3P**, 3-(Methylthio)propanal
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); **PREP (Preparation)**
(continuous process for preparation of 3-(methylthio)propanal from a gaseous acrolein feed stream)

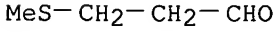
IT **107-02-8P**, Acrolein, preparation
RL: IMF (Industrial manufacture); **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(continuous process for preparation of 3-(methylthio)propanal from a gaseous acrolein feed stream)

RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)



IT **3268-49-3P**, 3-(Methylthio)propanal
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); **PREP (Preparation)**
(continuous process for preparation of 3-(methylthio)propanal from a gaseous acrolein feed stream)

RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)

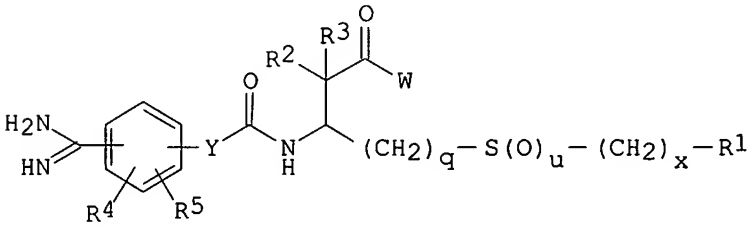


L49 ANSWER 13 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

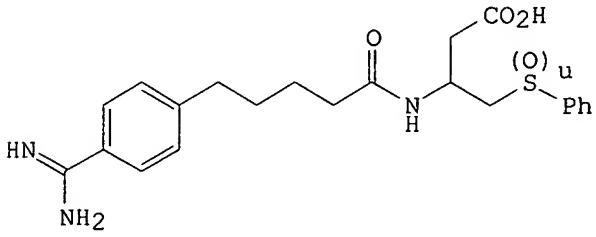
ACCESSION NUMBER: 1994:655416 CAPLUS
DOCUMENT NUMBER: 121:255416
TITLE: Phenyl amidine thio derivatives useful as platelet aggregation inhibitors
INVENTOR(S): Adams, Steven Paul; Lindmark, Richard John; Miyano, Masateru; Rico, Joseph Gerace
PATENT ASSIGNEE(S): G.D. Searle and Co., USA; Monsanto Co.
SOURCE: PCT Int. Appl., 94 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9418162	A1	19940818	WO 1994-US600	19940131
W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, UZ, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5409939	A	19950425	US 1993-17203	19930212
AU 9462299	A1	19940829	AU 1994-62299	19940131
US 5543425	A	19960806	US 1994-330486	19941028
PRIORITY APPLN. INFO.:			US 1993-17203 A	19930212
			WO 1994-US600 W	19940131

OTHER SOURCE(S): MARPAT 121:255416
GI



I



II

AB The invention relates to compds. I [R1 = alkyl, (un)substituted Ph, 5- or 6-membered heteroaryl containing 1 N, O, or S atom; R2, R3 = H, alkyl; R4, R5 = H, alkyl, alkoxy, halo; Y = alkylene, alkenylene, alkynylene; W = OR where R = H or alkyl; q = 1-4; u = 0-2; x = 0-3], which are useful in the inhibition of platelet aggregation. For example, alkylation of PhSH by ClCH2COCH2CO2Me, reductive amination of the resulting PhSCH2COCH2CO2Me, and hydrolysis, gave (±)-PhSCH2CH(NH2)CH2CO2H, which was coupled with p-[H2NC(:NH)]C6H4(CH2)4CO2H using di-N,N'-succinimidyl carbonate and DMAP,

to give title compound (±)-II (u = 0). Stepwise oxidation with H2O2 in aqueous AcOH gave the sulfinyl compound (±)-II (u = 1) and then the sulfone (±)-II (u = 2). The latter had an IC50 of 0.028 μM for inhibition of collagen-induced aggregation in canine platelet-rich plasma in vitro.

IC ICM C07C317-50
ICS C07C323-59; C07D213-71; A61K031-155; A61K031-44

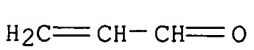
CC 25-19 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 1

IT 100-53-8, Benzyl mercaptan **107-02-8**, Acrolein, reactions
108-98-5, Thiophenol, reactions 124-63-0, Methanesulfonyl chloride 371-42-6, p-Fluorothiophenol 590-17-0, Bromoacetonitrile 623-73-4, Ethyl diazoacetate 696-63-9, p-Methoxythiophenol 1071-46-1, Ethyl hydrogen malonate 1073-72-9, p-Methyl(thiophenol) 2637-34-5, 2-Mercaptopyridine 5188-07-8, Sodium thiomethoxide 7022-45-9, 2-(Methylthio)benzaldehyde 7536-58-5, N-(tert-Butoxycarbonyl)aspartic acid, β-benzyl ester 32807-28-6, Methyl 4-chloroacetoacetate 152151-37-6, 5-(p-Amidinophenyl)pentanoic acid
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(preparation of Ph amidine thio derivs. as platelet aggregation inhibitors)

IT **3268-49-3P**, 3-(Methylthio)propionaldehyde 21681-88-9P, p-Tolylthioacetonitrile 42404-23-9P, 1-Amino-2-(4-tolylthio)ethane 71483-05-1P, 4-(Phenylthio)-3-oxobutanoic acid 79069-16-2P, (S)-Benzyl 3-(tert-butoxycarbonylamino)-4-hydroxybutyrate 118123-92-5P, 5-(Methylthio)-3-oxopentanoic acid 118743-11-6P 149193-64-6P, (S)-Benzyl 3-(tert-butoxycarbonylamino)-4-(methylsulfonyloxy)butyrate 158510-54-4P, (±)-3-Amino-5-(benzylthio)pentanoic acid 158510-55-5P 158510-56-6P, (±)-3-Amino-4-(4-methylphenylthio)butanoic acid 158510-57-7P, (±)-3-Amino-4-(4-methylphenylthio)butanoic acid methyl ester 158510-58-8P, (±)-3-Amino-4-(4-methoxyphenylthio)butanoic acid 158510-59-9P 158510-60-2P, (±)-3-Amino-4-(4-methoxyphenylthio)butanoic acid methyl ester 158510-61-3P 158510-62-4P, (±)-3-Amino-4-(4-fluorophenylthio)butanoic acid methyl ester 158510-63-5P, (±)-3-Amino-4-(2-pyridylthio)butanoic acid 158510-64-6P 158510-65-7P, (±)-3-Amino-4-(2-pyridylthio)butanoic acid methyl ester 158510-66-8P, (±)-3-Amino-4-(phenylthio)butanoic acid 158510-68-0P, (±)-3-Amino-3-[2-(methylthio)phenyl]propanoic acid 158510-69-1P, (S)-Benzyl 3-amino-4-(2-pyridylsulfonyl)butyrate 158510-70-4P, (S)-Benzyl 3-(tert-butoxycarbonylamino)-4-(2-pyridylthio)butyrate 158570-14-0P, (±)-3-Amino-5-(methylthio)pentanoic acid 158702-52-4P, (±)-3-Amino-4-(4-fluorophenylthio)butanoic acid 170726-32-6P, (±)-3-Amino-4-(phenylthio)butanoic acid methyl ester
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation of Ph amidine thio derivs. as platelet aggregation inhibitors)

IT **107-02-8**, Acrolein, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(preparation of Ph amidine thio derivs. as platelet aggregation inhibitors)

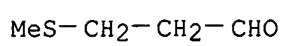
RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)



IT **3268-49-3P**, 3-(Methylthio)propionaldehyde
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(preparation of Ph amidine thio derivs. as platelet aggregation inhibitors)

RN 3268-49-3 CAPLUS

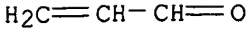
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)



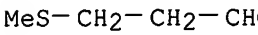
L49 ANSWER 14 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1990:630786 CAPLUS
DOCUMENT NUMBER: 113:230786
TITLE: Photochemical preparation of 3-(organothio)aldehydes from a mercaptan and α,β-unsaturated aliphatic aldehydes
INVENTOR(S): Sandler, Stanley R.
PATENT ASSIGNEE(S): Pennwalt Corp., USA
SOURCE: U.S., 3 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4944853	A	19900731	US 1989-405784	19890911
IN 173789	A	19940716	IN 1990-CA292	19900409
JP 03184952	A2	19910812	JP 1990-94184	19900411
EP 417386	A1	19910320	EP 1990-107565	19900420
R: BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE				
AU 9053784	A1	19910411	AU 1990-53784	19900423
AU 631202	B2	19921119		
BR 9001870	A	19911112	BR 1990-1870	19900423

PRIORITY APPLN. INFO.: US 1989-405784 A 19890911
OTHER SOURCE(S): CASREACT 113:230786; MARPAT 113:230786
AB 3-(Organothio)aldehydes R1CH(SR2)CH2CHO (I; R1 = H, C1-7 alkyl; R2 = C1-12 alkyl, C5-6 cycloalkyl, C6-12 aryl or alkaryl), useful as intermediates for the preparation of pesticides and antioxidants and as odorant or flavoring agents, are prepared by reaction of a mercaptan with substantially equimolar amount of α,β-unsatd. aliphatic aldehyde at .apprx.2°-60° in the absence of O-containing gas. Thus, a solution of 3.0 mol EtSH and 3.0 mol crotonaldehyde was cooled to 2-20° and was photolyzed in a 500 mL borosilicate reactor under the irradiation with a 450 W Hanovia high-pressure Hg lamp, while a slow stream of N was passed into the reactor. I (R1 = Me, R2 = Et) was obtained in 55.2% yield.
IC ICM B01J019-08
INCL 204157760
CC 23-14 (Aliphatic Compounds)
Section cross-reference(s): 5, 62
IT **107-02-8**, Acrolein, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(photochem. addition of, with Me mercaptan)
IT **3268-49-3P**, 3-(Methylthio)propanal 27205-24-9P, 3-(Ethylthio)butanal
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of, photochem. addition in)
IT **107-02-8**, Acrolein, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(photochem. addition of, with Me mercaptan)
RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)



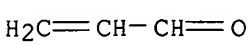
IT **3268-49-3P**, 3-(Methylthio)propanal
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of, photochem. addition in)
RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)



L49 ANSWER 15 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1985:487504 CAPLUS
DOCUMENT NUMBER: 103:87504
TITLE: Continuous preparation of β-methylmercaptopropionaldehyde
INVENTOR(S): Pavlovschi, Ana Maria; Levinta, Lucia; Gross, Gernot Holger
PATENT ASSIGNEE(S): Combinatul Petrochimic, Pitesti, Rom.
SOURCE: Rom., 2 pp.
CODEN: RUXXA3
DOCUMENT TYPE: Patent
LANGUAGE: Romanian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RO 85095	B	19840924	RO 1982-106977	19820322

PRIORITY APPLN. INFO.: RO 1982-106977 19820322
AB The addition reaction of CH2:CHCHO with MeSH at atmospheric pressure at 30-45° gave MeSCH2CH2CHO in high yields.
IC ICM C07C151-00
CC 23-14 (Aliphatic Compounds)
IT **107-02-8**, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(addition of, with methanethiol)
IT **3268-49-3P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
IT **107-02-8**, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(addition of, with methanethiol)
RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)



IT **3268-49-3P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)

MeS—CH_2—CH_2—CHO

L49 ANSWER 16 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1984:105476 CAPLUS
DOCUMENT NUMBER: 100:105476
TITLE: New process solved handling problems
AUTHOR(S): Niklasson, Rune
CORPORATE SOURCE: Rhone-Poulenc, Fr.
SOURCE: Kemisk Tidskrift (1969-1993) (1983), 95(12), 33
CODEN: KETIAL; ISSN: 0039-6605
DOCUMENT TYPE: Journal
LANGUAGE: Swedish
AB The handling of toxic, flammable acrolein [107-02-8] in the manufacture of methionine [59-51-8] via MeSCH2CH2CHO (I) [3268-49-3] is minimized by in-plant synthesis of acrolein (from propene) and absorption in I prior to reaction with MeSH [74-93-1] to give I.
CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
Section cross-reference(s): 34
IT **3268-49-3P**
RL: **PREP (Preparation)**
(preparation and conversion to methionine)
IT **107-02-8P**, preparation
RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and reaction with methanethiol, in manufacture of methionine)
IT **3268-49-3P**
RL: **PREP (Preparation)**
(preparation and conversion to methionine)
RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)

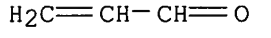
MeS—CH_2—CH_2—CHO

IT **107-02-8P**, preparation
RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and reaction with methanethiol, in manufacture of methionine)
RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)

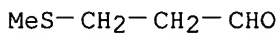
H_2C═CH—CH═O

L49 ANSWER 17 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1982:492707 CAPLUS
DOCUMENT NUMBER: 97:92707
TITLE: Secondary transformations of β-methylmercaptopropionaldehyde in methionine production
AUTHOR(S): Balakin, V. S.; Gorbunov, B. N.; Zvegintseva, G. B.; Romanova, L. S.
CORPORATE SOURCE: USSR
SOURCE: Khimicheskaya Promyshlennost (Moscow, Russian

Federation) (1982), (2), 84-5
CODEN: KPRMAW; ISSN: 0023-110X
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Condensation of MeSH and acrolein gave MeSCH2CH2CHO (I), which was converted to methionine by condensation with NH3 and HCN. By-products in the formation of I were the oligomer HO[CH(CH2CH2SMe)O]x and aldol condensation products of I. The effects of reaction conditions on the rate of formation and extent of formation of these by-products were determined
CC 34-2 (Amino Acids, Peptides, and Proteins)
IT **107-02-8**, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(addition reaction of, with methanethiol)
IT **3268-49-3P**
RL: SPN (Synthetic preparation); FORM (Formation, nonpreparative); **PREP (Preparation)**
(formation of, as intermediate in preparation of methionine)
IT **107-02-8**, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(addition reaction of, with methanethiol)
RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)



IT **3268-49-3P**
RL: SPN (Synthetic preparation); FORM (Formation, nonpreparative); **PREP (Preparation)**
(formation of, as intermediate in preparation of methionine)
RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)



L49 ANSWER 18 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1981:191700 CAPLUS
DOCUMENT NUMBER: 94:191700
TITLE: Direct preparation of β-methylthiopropionaldehyde
INVENTOR(S): Komorn, Yves; Schwachhofer, Ghislain
PATENT ASSIGNEE(S): Rhone-Poulenc Industries S. A., Fr.
SOURCE: Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 22697	A1	19810121	EP 1980-400951	19800625
EP 22697	B1	19811230		
R: BE, CH, DE, FR, GB, IT, NL, SE				
FR 2460925	A1	19810130	FR 1979-17827	19790710
FR 2460925	B1	19810814		
US 4319047	A	19820309	US 1980-164539	19800702

BR 8004260	A	19810127	BR 1980-4260	19800709
ES 493224	A1	19810416	ES 1980-493224	19800709
CA 1138896	A1	19830104	CA 1980-355801	19800709
SU 1318153	A3	19870615	SU 1980-2948390	19800709
JP 56053648	A2	19810513	JP 1980-93336	19800710
JP 57008098	B4	19820215		

PRIORITY APPLN. INFO.: FR 1979-17827 A 19790710

AB Acrolein, prepared by air oxidation of propylene, was purified and treated with MeSH to yield MeSCH2CH2CHO in an apparatus which is described. The acrylic acid impurity was removed from the acrolein by countercurrent washing in water or solvent; the water was removed by condensation and the condensate was partially vaporized to recover acrolein.

IC C07C149-14

CC 23-14 (Aliphatic Compounds)

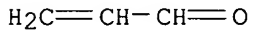
IT **107-02-8P**, reactions
RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and addition reaction of, with methanethiol)

IT **3268-49-3P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)

IT **107-02-8P**, reactions
RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(preparation and addition reaction of, with methanethiol)

RN 107-02-8 CAPLUS

CN 2-Propenal (9CI) (CA INDEX NAME)



IT **3268-49-3P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)

RN 3268-49-3 CAPLUS

CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)

L49 ANSWER 19 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1977:120784 CAPLUS

DOCUMENT NUMBER: 86:120784

TITLE: β-Methylthiopropionaldehyde

INVENTOR(S): Biola, Georges; Komorn, Yves; Limongi, Eric

PATENT ASSIGNEE(S): Rhone-Poulenc S. A., Fr.

SOURCE: Ger. Offen., 12 pp.
CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2627430	A1	19761223	DE 1976-2627430	19760618
DE 2627430	B2	19770721		

DE 2627430	C3	19850110		
FR 2314917	A1	19770114	FR 1975-20183	19750620
SU 691086	D	19791005	SU 1976-2370202	19760615
US 4225516	A	19800930	US 1976-696432	19760615
JP 52003013	A2	19770111	JP 1976-70901	19760616
JP 57000317	B4	19820106		
ES 448918	A1	19770701	ES 1976-448918	19760616
BE 843077	A1	19761217	BE 1976-168033	19760617
NL 7606580	A	19761222	NL 1976-6580	19760617
NL 184517	B	19890316		
NL 184517	C	19890816		
SE 7607035	A	19761221	SE 1976-7035	19760618
SE 431089	B	19840116		
SE 431089	C	19840426		
BR 7603949	A	19770322	BR 1976-3949	19760618
CH 610882	A	19790515	CH 1976-7831	19760618
CA 1069536	A1	19800108	CA 1976-255246	19760618

PRIORITY APPLN. INFO.: FR 1975-20183 A 19750620

AB The waste gas from acrolein (I) synthesis containing .apprx.5% I was freed from H2C:CHCO2H and H2O and dissolved in MeSCH2CH2CHO (II), then treated with MeSH at .apprx.30° to give MeSCH2CH2C(SMe)OH, which was maintained at .apprx.0.15% in the solution The combined yield of II was 99%.

IC C07C149-14

CC 23-14 (Aliphatic Compounds)

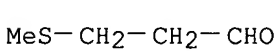
IT **3268-49-3P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)

IT **107-02-8**, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(reaction of, with methyl mercaptan)

IT **3268-49-3P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)

RN 3268-49-3 CAPLUS

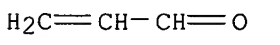
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)



IT **107-02-8**, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(reaction of, with methyl mercaptan)

RN 107-02-8 CAPLUS

CN 2-Propenal (9CI) (CA INDEX NAME)



L49 ANSWER 20 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1976:591795 CAPLUS

DOCUMENT NUMBER: 85:191795

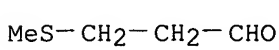
TITLE: Reaction of hemimercaptals with unsaturated organic compounds

AUTHOR(S): Rykov, V. K.; Sizov, S. Yu.; Sukhanov, S. V.

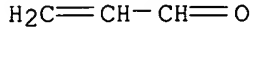
CORPORATE SOURCE: USSR

SOURCE: v sb., Funkts. Organ. Soedin. i Polimery (1975) 287-9
From: Ref. Zh., Khim. 1976, Abstr. No. 14B1090

DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Title only translated.
CC 22-3 (Physical Organic Chemistry)
IT **3268-49-3P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
IT **107-02-8**, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(with hemimercaptals)
IT **3268-49-3P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)

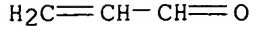


IT **107-02-8**, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(with hemimercaptals)
RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)

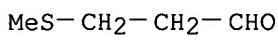


L49 ANSWER 21 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1976:576769 CAPLUS
DOCUMENT NUMBER: 85:176769
TITLE: Development of a continuous method for preparation of 3-(methylthio)propionaldehyde
AUTHOR(S): Zvegintseva, G. B.; Medvedev, A. I.; Reimer, M. I.; Dyadchenko, M. A.
CORPORATE SOURCE: Nauchno-Issled. Inst. Khim. Polim. Mater., Tambov, USSR
SOURCE: Tezisy Dokl. Nauchn. Sess. Khim. Tekhnol. Org. Soedin. Sery Sernistykh Neftei, 13th (1974), 343. Editor(s): Gal'pern, G. D. "Zinatne": Riga, USSR.
CODEN: 33SUAA
DOCUMENT TYPE: Conference
LANGUAGE: Russian
AB A math. model was used to optimize a continuous process for MeSCH2CH2CHO (I) synthesis by reacting MeSH with acrolein (II); I was saturated with MeSH, and the resulting solution was treated with II in the presence of Et3N.
CC 23-14 (Aliphatic Compounds)
IT **107-02-8**, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(addition reaction with methanethiol, catalysis, simulation, and optimization of)
IT **3268-49-3P**
RL: **PREP (Preparation)**
(by addition reaction of methanethiol with acrolein, catalysis, simulation, and optimization of)
IT **107-02-8**, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**

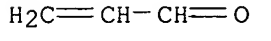
(addition reaction with methanethiol, catalysis, simulation, and optimization of)
RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)



IT **3268-49-3P**
RL: **PREP (Preparation)**
(by addition reaction of methanethiol with acrolein, catalysis, simulation, and optimization of)
RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)



L49 ANSWER 22 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1976:523278 CAPLUS
DOCUMENT NUMBER: 85:123278
TITLE: Peroxide initiation of the reaction of mercaptans with unsaturated compounds
AUTHOR(S): Rykov, B. K.; Sizov, S. Yu.; Sukhanov, S. V.
CORPORATE SOURCE: Volzh. Zavod. Org. Sint., Volzhsk, USSR
SOURCE: Tezisy Dokl. Nauchn. Sess. Khim. Tekhnol. Org. Soedin. Sery Sernistykh Neftei, 13th (1974), 343. Editor(s): Gal'pern, G. D. "Zinatne": Riga, USSR.
CODEN: 33SUAA
DOCUMENT TYPE: Conference
LANGUAGE: Russian
AB RSH (R = lower alkyl, e.g., Me) addition to unsatd. compds. (e.g., acrolein) to give the corresponding sulfides (e.g., MeSCH2CH2CHO) was initiated by organic peroxides; α-haloacyl peroxides were recommended.
CC 23-9 (Aliphatic Compounds)
IT **107-02-8**, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(addition reaction with methyl mercaptan, initiator for)
IT **3268-49-3P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
IT **107-02-8**, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(addition reaction with methyl mercaptan, initiator for)
RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)



IT **3268-49-3P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)

MeS—CH_2—CH_2—CHO

L49 ANSWER 23 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1975:409198 CAPLUS
DOCUMENT NUMBER: 83:9198
TITLE: S-Substituted mercaptopropionaldehyde
INVENTOR(S): Ito, Hiroo; Kimura, Kaoru; Yamada, Akira
PATENT ASSIGNEE(S): Toa Gosei Chemical Industry Co., Ltd.
SOURCE: Jpn. Tokkyo Koho, 3 pp.
CODEN: JAXXAD
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 49024045	B4	19740620	JP 1970-43681	19700523
PRIORITY APPLN. INFO.:			JP 1970-43681	19700523

AB Cr(OAc)3.H2O and n-dodecylmercaptan were kept 1 hr at 30° with acrolein, containing a polymerization inhibitor (e.g. hydroquinone), to give 82.1% β-n-dodecylthiopropionaldehyde. The reaction of RSH (R = Me, Et, Bu, Ph) with RCH:CR1CHO (R = H, R1 = H, Me; R = Me, R1 = H) and inorg. Cr salts were also discussed.
IC C07C; B01J
CC 23-14 (Aliphatic Compounds)
IT 78-85-3 **107-02-8**, reactions 4170-30-3
RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**
(addition reaction with thiols, catalysts for)
IT **3268-49-3P** 19378-51-9P 27098-65-3P 38160-52-0P 38160-57-5P 55154-14-8P
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
IT **107-02-8**, reactions
RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**
(addition reaction with thiols, catalysts for)
RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)

H_2C═CH—CH═O

IT **3268-49-3P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)

MeS—CH_2—CH_2—CHO

L49 ANSWER 24 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1975:409197 CAPLUS

DOCUMENT NUMBER: 83:9197
TITLE: β-Methylthiopropionaldehyde and its alkyl derivatives
INVENTOR(S): Ohuchi, Shunji; Shibuya, Kazumasa
PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd.
SOURCE: Jpn. Tokkyo Koho, 3 pp.
CODEN: JAXXAD
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 49024046	B4	19740620	JP 1970-78498	19700909

PRIORITY APPLN. INFO.: JP 1970-78498 19700909

AB MeSH was added to RCH:CR1COR2 (R, R1, R2 = H, alkyl) in EtOH containing β-PhNHC10H7, NH4O2CNH2, NH4HCO3, (NH4)2CO3, NH4Cl-NaHCO3, or NH3-CO2 at 10-20° to give ≤90% MeSCHRCHR1COR2.
IC C07C; B01J
CC 23-14 (Aliphatic Compounds)
IT **107-02-8**, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(addition reaction with methylmercaptan, catalysts for)
IT **3268-49-3P**
RL: **PREP (Preparation)**
(by addition reaction of methylmercaptan with acrolein, catalyst for)
IT **107-02-8**, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(addition reaction with methylmercaptan, catalysts for)
RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)

$H_2C{=}CH{-}CH{=}O$

IT **3268-49-3P**
RL: **PREP (Preparation)**
(by addition reaction of methylmercaptan with acrolein, catalyst for)
RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)

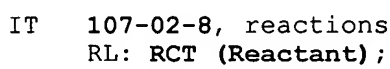
$MeS{-}CH_2{-}CH_2{-}CHO$

L49 ANSWER 25 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1975:111583 CAPLUS
DOCUMENT NUMBER: 82:111583
TITLE: β-(Methylthio)propionaldehyde
INVENTOR(S): Rykov, V. K.
PATENT ASSIGNEE(S): Volzhskii Plant of Organic Synthesis
SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1974, 51(44), 52.
CODEN: URXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1

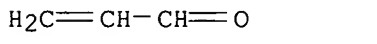
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 451695	T	19741130	SU 1972-1839622	19721016
PRIORITY APPLN. INFO.:			SU 1972-1839622 A	19721016

AB MeSCH2CH2CHO (I) was prepared by treating I (poly(methyl mercaptal) with acrolein in the presence of Et3N at ≤100°; the acrolein was added by siphoning into the lower part of the reactor.
IC C07C
CC 23-14 (Aliphatic Compounds)
IT **3268-49-3P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
IT **107-02-8**, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(with (methylthio)propionaldehyde poly(methyl mercaptal))
IT **3268-49-3P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)



IT **107-02-8**, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(with (methylthio)propionaldehyde poly(methyl mercaptal))
RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)

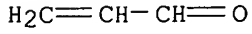


L49 ANSWER 26 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1975:16324 CAPLUS
DOCUMENT NUMBER: 82:16324
TITLE: β-(Methylthio)propionaldehyde
INVENTOR(S): Sizov, S. Yu.; Sukhanov, S. V.; Rykov, V. K.; Shustov, V. I.; Tsarenko, S. V.
PATENT ASSIGNEE(S): Volzhskii Plant of Organic Synthesis
SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1974, 51(34), 63.
CODEN: URXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

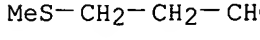
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 443029	T	19740915	SU 1972-1819472	19720810
PRIORITY APPLN. INFO.:			SU 1972-1819472 A	19720810

AB MeSCH2CH2CHO (I) was prepared by treating acrolein with MeSH in an organic solvent (e.g., I) in 1:1 I-MeSH ratio.
IC C07C

CC 23-14 (Aliphatic Compounds)
IT **107-02-8**, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(addition reaction with methanethiol)
IT **3268-49-3P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
IT **107-02-8**, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(addition reaction with methanethiol)
RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)



IT **3268-49-3P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)



L49 ANSWER 27 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1975:16319 CAPLUS
DOCUMENT NUMBER: 82:16319
TITLE: 3-Methylmercaptopropionaldehyde
INVENTOR(S): Koberstein, Edgar; Mueller, Klaus; Theissen, Ferdinand
PATENT ASSIGNEE(S): Deutsche Gold- und Silber-Scheideanstalt vorm. Roessler
SOURCE: Ger., 3 pp.
CODEN: GWXXAW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2320544	B1	19740912	DE 1973-2320544	19730421
DE 2320544	C2	19750605		
US 4048232	A	19770913	US 1973-399127	19730920
SU 505357	D	19760228	SU 1974-1996514	19740218
DD 110862	C	19750112	DD 1974-176862	19740228
ES 423736	A1	19760416	ES 1974-423736	19740228
GB 1400702	A	19750723	GB 1974-9296	19740301
NL 7404691	A	19741023	NL 1974-4691	19740405
BR 7402784	A0	19741105	BR 1974-2784	19740408
CH 582665	A	19761215	CH 1974-5019	19740410
RO 68025	P	19801230	RO 1974-78468	19740418
BE 813990	A1	19741021	BE 1974-6044553	19740419
FR 2226393	A1	19741115	FR 1974-13752	19740419
JP 50012012	A2	19750207	JP 1974-44369	19740419
AT 7403268	A	19751215	AT 1974-3268	19740419
AT 331773	B	19760825		

IT 1005995	A	19760930	IT 1974-50485	19740419
CA 1005460	A1	19770215	CA 1974-197828	19740419
SE 397344	B	19771031	SE 1974-5321	19740419

PRIORITY APPLN. INFO.: DE 1973-2320544 A 19730421

AB CH2:CHCHO reacted with MeSH in the presence of hexamethylenetetramine catalyst to give 99.0-99.8% MeSCH2CH2CHO.

IC C07C

CC 23-14 (Aliphatic Compounds)

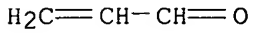
IT **107-02-8**, reactions
RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**
(addition reaction of, with methanethiol, catalysts for)

IT **3268-49-3P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)

IT **107-02-8**, reactions
RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**
(addition reaction of, with methanethiol, catalysts for)

RN 107-02-8 CAPLUS

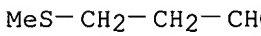
CN 2-Propenal (9CI) (CA INDEX NAME)



IT **3268-49-3P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)

RN 3268-49-3 CAPLUS

CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)



L49 ANSWER 28 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1975:16318 CAPLUS

DOCUMENT NUMBER: 82:16318

TITLE: β-Methylthiopropionaldehyde

INVENTOR(S): Kojima, Takeshi; Horisawa, Toshiharu; Shimasaki, Masami; Ito, Ryoichi

PATENT ASSIGNEE(S): Kanegafuchi Chemical Industry Co., Ltd.

SOURCE: Jpn. Tokkyo Koho, 2 pp.
CODEN: JAXXAD

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 49024890	B4	19740626	JP 1970-82267	19700919

PRIORITY APPLN. INFO.: JP 1970-82267 19700919

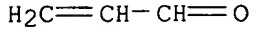
AB Amino acids catalyzed the addition of MeSH (I) to CH2:CHCHO (II). Thus, 56 g II were added to 48 g I containing 0.5 g methionine at <40° over 60 min to give 93.6 g MeSCH2CH2CHO.

IC C07C; B01J

CC 23-14 (Aliphatic Compounds)

IT **107-02-8**, reactions
RL: **RCT (Reactant)**; **RACT (Reactant or reagent)**

(addition reaction with methanethiol, catalyyts for)
IT **3268-49-3P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
IT **107-02-8**, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(addition reaction with methanethiol, catalyyts for)
RN 107-02-8 CAPLUS
CN 2-Propenal (9CI) (CA INDEX NAME)



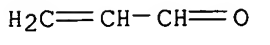
IT **3268-49-3P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)

L49 ANSWER 29 OF 29 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1975:16317 CAPLUS
DOCUMENT NUMBER: 82:16317
TITLE: S-Substituted mercaptopropionaldehyde
INVENTOR(S): Ito, Hiroo; Kimura, Kaoru; Sato, Masakatsu; Yamada, Akira
PATENT ASSIGNEE(S): Toa Gosei Chemical Industry Co., Ltd.
SOURCE: Jpn. Tokkyo Koho, 3 pp.
CODEN: JAXXAD
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

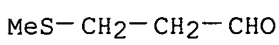
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 49024454	B4	19740622	JP 1970-43680	19700523
PRIORITY APPLN. INFO.:			JP 1970-43680	19700523

AB The addition of RSH (R = alkyl) to R1CH:CR2CHO (R1, R2 = H, alkyl) to give RSCHR1CHR2CHO was promoted by strong acid catalysts, which activated the double bond by protonating the CO group. Thus, CH2:CHCHO was added dropwise at 0-6.8° to MeSH and HCl, then held 1 hr at 30° to give 86.5% MeSCH2CH2CHO.
IC C07C; B01J
CC 23-14 (Aliphatic Compounds)
IT **107-02-8**, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(addition reaction with methanethiol)
IT **3268-49-3P** 19378-51-9P
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
IT **107-02-8**, reactions
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(addition reaction with methanethiol)
RN 107-02-8 CAPLUS

CN 2-Propenal (9CI) (CA INDEX NAME)



IT **3268-49-3P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)
RN 3268-49-3 CAPLUS
CN Propanal, 3-(methylthio)- (9CI) (CA INDEX NAME)



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L52 7 SEA FILE=CAPLUS ABB=ON PLU=ON REY PATRICK/AU

=> => d ibib abs L52 1-7

L52 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:985547 CAPLUS
DOCUMENT NUMBER: 142:112545
TITLE: Hydrolysis of Nitriles Using an Immobilized Nitrilase: Applications to the Synthesis of Methionine Hydroxy Analogue Derivatives
AUTHOR(S): **Rey, Patrick**; Rossi, Jean-Christophe; Taillades, Jacques; Gros, Georges; Nore, Olivier

CORPORATE SOURCE: Organisation Moleculaire-Evolution et Materiaux Fluores (UMR CNRS 5073) CC009/CC017, Universite Montpellier II, Montpellier, 34095, Fr.
SOURCE: Journal of Agricultural and Food Chemistry (2004), 52(26), 8155-8162
CODEN: JAFCAU; ISSN: 0021-8561
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 142:112545

AB Mild and selective hydrolysis of a large range of nitriles leading to carboxylic acids was achieved under neutral conditions by an immobilized and genetically modified enzyme preparation from Alcaligenes faecalis ATCC8750. This immobilized nitrilase has been shown to be an effective catalyst for the stereoselective hydrolysis of mandelonitrile 1a to R-(-)-mandelic acid 1c. This method is particularly useful for the production of hydroxy analogs of methionine derivs. 2c-4c that could have an interest in cattle feeding and for the transformation of compds. containing other acid- or base-sensitive groups 3a-10a. A series of aliphatic dinitriles 11a-15a was hydrolyzed to the corresponding cyano acids. The suitability of the immobilized catalyst as a robust and versatile biocatalyst is discussed, and models to account for the stereoselectivity of the enzymic hydrolysis have been proposed.

REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:348011 CAPLUS
DOCUMENT NUMBER: 140:356948
TITLE: Catalytic addition reaction for the production of 3-(methylthio)propanal from mercaptomethane and acrolein
INVENTOR(S): **Rey, Patrick**
PATENT ASSIGNEE(S): Adisseo France S.A.S., Fr.
SOURCE: Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1413573	A1	20040428	EP 2002-356211	20021024
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
CA 2495746	AA	20040506	CA 2003-2495746	20031014
WO 2004037774	A1	20040506	WO 2003-IB4557	20031014
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003267771	A1	20040513	AU 2003-267771	20031014
EP 1556343	A1	20050727	EP 2003-748466	20031014

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

BR 2003015385	A	20050823	BR 2003-15385		20031014
US 2005240048	A1	20051027	US 2005-524548		20050516
NO 2005002471	A	20050725	NO 2005-2471		20050523
PRIORITY APPLN. INFO.:			EP 2002-356211	A	20021024
			WO 2003-IB4557	W	20031014

OTHER SOURCE(S): CASREACT 140:356948

AB A process for the production of 3-(methylthio)propanal comprises reacting mercaptomethane and acrolein in the presence of a catalyst comprising an organic base such as an N-alkylmorpholine (e.g., 4-methylmorpholine).

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:639035 CAPLUS
DOCUMENT NUMBER: 139:166201
TITLE: Process for purification of acrolein
INVENTOR(S): Gros, Georges; Garrait, Michel; **Rey, Patrick**
PATENT ASSIGNEE(S): Aventis Animal Nutrition S.A., Fr.
SOURCE: Fr. Demande, 20 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
FR 2835831	A1	20030815	FR 2002-1686		20020212
CA 2474416	AA	20030821	CA 2003-2474416		20030212
WO 2003068721	A1	20030821	WO 2003-FR454		20030212
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
AU 2003226883	A1	20030904	AU 2003-226883		20030212
EP 1474374	A1	20041110	EP 2003-739531		20030212
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK					
BR 2003007450	A	20041228	BR 2003-7450		20030212
US 2005103616	A1	20050519	US 2003-500715		20030212
CN 1630627	A	20050622	CN 2003-803721		20030212
JP 2005521684	T2	20050721	JP 2003-567856		20030212
ZA 2004005340	A	20050630	ZA 2004-5340		20040705
NO 2004003715	A	20040906	NO 2004-3715		20040906
PRIORITY APPLN. INFO.:			FR 2002-1686	A	20020212
			WO 2003-FR454	W	20030212

AB The present invention thus has as an aim a continuous process of purification of the acrolein in which: (1) an aqueous acrolein solution deprived of noncondensable gas is fed into a distillation column; (2) an aqueous mixture is drawn off from the bottom; (3) a mixture based on acrolein and water is drawn off from the head; (4) the head fraction is cooled to sep. the water from an

acrolein-rich gas, and (5) acrolein is isolated from the gas from (4). The resulting acrolein is suitable for manufacture of 3-methylthiopropionaldehyde by reaction with Me mercaptan.
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:537162 CAPLUS
DOCUMENT NUMBER: 139:276941
TITLE: Et3B-induced radical addition of diphenylphosphine oxide to unsaturated compounds
AUTHOR(S): **Rey, Patrick**; Taillades, Jacques; Rossi, Jean Christophe; Gros, Georges
CORPORATE SOURCE: Adisseo, Antony, 92164, Fr.
SOURCE: Tetrahedron Letters (2003), 44(32), 6169-6171
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 139:276941
AB Et3B-catalyzed addition of diphenylphosphine oxide to unsatd. compds., alkenes, unsatd. acids, allylic alcs., and allylic α-O-acetyl nitriles constitutes a practical route to a variety of functionalized diphenylphosphine oxides. The very mild conditions employed, together with the short reaction times, make the procedure highly versatile and tolerant to a range of functionalities. For example, Ph2P(O)H reacted with CH2:CH(CH2)5CH3 in the presence of BEt3 at 20°C in MeOH giving Ph2P(O)CH2CH2(CH2)5CH3 in 96% yield.
REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:906529 CAPLUS
DOCUMENT NUMBER: 138:3754
TITLE: Method of preparing aliphatic carboxylic acids by enzymatic hydrolysis of aliphatic nitrile compounds
INVENTOR(S): Gros, Georges; Garrait, Michel; Taillades, Jacques; **Rey, Patrick**
PATENT ASSIGNEE(S): Adisseo France S.A.S., Fr.
SOURCE: PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002095045	A2	20021128	WO 2002-FR1665	20020517
WO 2002095045	A3	20031224		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

FR 2824823 A1 20021122 FR 2001-6665 20010521
PRIORITY APPLN. INFO.: FR 2001-6665 A 20010521
OTHER SOURCE(S): CASREACT 138:3754; MARPAT 138:3754
AB The invention relates to a novel method of preparing aliphatic carboxylic acids by enzymic hydrolysis of aliphatic nitrile compds. The inventive method is characterized in that: (a) a biol. material having a nitrilase activity is prepared; (b) said biol. material is immobilized; (c) a nitrile compound is brought into contact with the biol. material thus immobilized in order to obtain the ammonium salt of the aliphatic carboxylic acid formed; and (d), optionally, the acid formed is purified.

L52 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:904360 CAPLUS
DOCUMENT NUMBER: 138:4351
TITLE: Addition reaction process and alkylboron catalysts for the production of thioether-containing organic compounds from mercaptans and unsaturated compounds
INVENTOR(S): Gros, Georges; Garrait, Michel; **Rey, Patrick** ; Taillades, Jacques
PATENT ASSIGNEE(S): Aventis Animal Nutrition S.A., Fr.
SOURCE: Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1260500	A1	20021127	EP 2001-420115	20010518
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
WO 2002094771	A1	20021128	WO 2002-EP6971	20020516
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

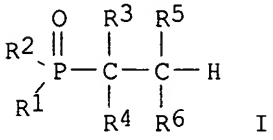
PRIORITY APPLN. INFO.: EP 2001-420115 A 20010518
OTHER SOURCE(S): CASREACT 138:4351; MARPAT 138:4351
AB An addition reaction process and alkylboron catalysts (e.g., triethylboron) for the production of thioether-containing organic compds. [e.g., 4-(methylthio)butyric acid] from mercaptans (e.g., Me mercaptan) and unsatd. compds. (e.g., vinylacetic acid) at ≤50°.
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:889591 CAPLUS
DOCUMENT NUMBER: 137:370216
TITLE: Preparation of phosphorus-containing organic compounds
INVENTOR(S): Gros, Georges; Garrait, Michel; **Rey, Patrick** ; Taillades, Jacques
PATENT ASSIGNEE(S): Adisseo France S.A.S., Fr.
SOURCE: U.S. Pat. Appl. Publ., 5 pp.

CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002173671	A1	20021121	US 2002-147064	20020517
US 6727378	B2	20040427		
EP 1260514	A1	20021127	EP 2001-420114	20010518
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.: EP 2001-420114 A 20010518
OTHER SOURCE(S): CASREACT 137:370216; MARPAT 137:370216
GI



I

AB Organic phosphorus-containing compds. [I; wherein R1, R2, independently = alkyl, aryl, hydroxy, alkoxy, aryloxy; R3, R4, R5, R6, independently = H, alkyl, alkylhydroxy, alkylcyano, etc.] were prepared by a process that comprises reacting a phosphorus-containing oxide with an unsatd. hydrocarbon in the presence of a boron-containing compound at a temperature of less than or equal to 50°. For example, di-Ph phosphine oxide was reacted with but-3-ene-2-ol in the presence of Et3B to give (80%) (3-hydroxybutyl)diphenylphosphine oxide.

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